

The Institutional Sources of Innovation in Korean and UK Online Gaming Firms

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A Despite their initial differences in knowledge stock regarding games development, Korean and UK firms have achieved world-renowned position in the global online games industry. This paper examines the institutional sources of innovation, with reference to the role of institutions in generating creativity in the earlier stage of the innovation process. This study shows both Korean and UK's firm value, regardless of their different socio-economic contexts, plays an important role in generating innovation. An additional point suggested in this paper is that the Korean game development firms are more likely to take advantage of governmental policy support in order to overcome inadequate institutional settings in conjunction with the initial conditions of the game industry.

Introduction

Global innovation is the main driver of firm growth in knowledge-intensive production such as interactive games (e.g. video games and online games). The fact that interactive games production has exhibited a strong spatial dimension and has clustered in the USA, Japan, Canada and the UK has highlighted the role of national institutions within the innovation process. More recently, Korea and the UK have nurtured some cutting-edge, home-grown firms in the emerging online games sector. It is the purpose of this paper to examine the institutional source of product innovation among these firms between 1997 and 2008, with reference to the earlier innovation process. Special attention is paid to the role of culture and the role of the state as facilitators in generating innovation.

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Amabile (1997) stated that innovation is, ‘the successful implementation of creative ideas’. Innovation is particularly important in interactive games as ‘fun’ is the key attribute that attracts consumers to spend leisure time on gaming. Innovation can take place in products, systems, processes and services (Freeman and Soete 1997). Product innovation has been described in terms of three sub-processes: the production of knowledge, the translation of knowledge into artifacts, and responding to and influencing market demand (Pavitt 2005). The production of knowledge could further be divided into two sub-processes: 1. idea exploration, generation and selection and 2. idea evaluation and accumulation. In this paper, the earlier product innovation relates to the first sub-process of knowledge production. In games development, this sub-process relates to the development of artistic characters, storylines, gameplay mechanics... etc.

The remainder of this paper is organized into the following sections. Section 2 will briefly introduce the Korean and UK online gaming industry. Section 3 will review the theoretical framework on the basis of previous studies in relation to institution and innovation, and will focus on the role of state and culture (which greatly influence product innovation in online games). Section 4 will discuss the methodology. In Sections 5 and 6, the institutional sources of innovation in terms of cultural value and public policy in Korean and UK online gaming firms will be explored. Section 7 will then compare and contrast these institutional sources upon earlier innovation process in Korea and the UK. Section 8 will conclude with policy implications and discussion for future studies.

Korean and UK Online Gaming

Korea and the UK are headquarters to over 300 indigenous interactive gaming firms. The two countries, though they have developed broadband infrastructure at a different pace, are at the forefront of online gaming development. Korea invested heavily in ICT infrastructure during the 1990s; as a result, it obtained a leading position in broadband access among the OECD countries and was ranked second (after Sweden) on the Global ICT development index (OECD 2001; ITU 2009). In contrast, broadband penetration in the UK has grown rapidly only in recent years. Though 97% of households had access to broadband in 2008, it was estimated that only about half of them actually chose it. Korea is the global leader in the online games market, generating about US\$1.9 billion in sales and creating hit titles such as Lineage and Maple Story. There are a few, large indigenous Korean firms such as NCsoft, Nexon and Webzen that have grown rapidly since the late 1990s. NCsoft, an early mover in global online games, was founded in 1997 with 20 employees. It had grown to the considerable size of 3,000 employees and over 4 million users worldwide including major markets such as the USA and China by 2008. The growth of NCsoft represents the over 10 percent year-on-year growth of the Korean online games sector for the last decade.

UK online gaming firms, in contrast, grew out of the globally successful video games sector. The skill set within UK games development is world renowned, and is represented not only by its sheer volume of sales but also by its capability to generate hit title series such as Tomb Raider and Grand Theft Auto. The origin of the UK video games industry, in turn, can be traced back to amateur firms’ developing products for home computer users such as the Sinclair Spectrum. Early pioneering firms Codemasters, Rare, DMA Design and Climax have grown since the 1980s and nurtured a generation of games professionals. Firms that have successfully positioned themselves in the emerging online games sector include Codemasters, Jagex, Monumental Games and RealTime Worlds. Though the number of indigenous online games firms is relatively small, the sector has the potential to expand due to the transferrable skills embedded in the video games segment.

Institution and Innovation

Innovations within firms are dependent mainly upon the organizational context (i.e. firm culture) and the institutional context in which firms are embedded (economic and socio-cultural). The Nobel Prize winning economist Douglas North states that, ‘institutions are the humanly devised constraints that shape human interaction’ (1990 p.3). One of the most cited institutions in capitalism is the market, which Williamson (1981) considers to be a fundamental institution. Institutions could be described in concrete and abstract terms; the former relates to research institutes, patent offices, corporate R&D departments... while the latter refers to customs, traditions, laws, property rights... In addition, North (op. cit.) suggests that institutions could be examined in the context of formal institutions (e.g. constitution and contracts) and informal institutions (e.g. norms of behavior). As institutions continuously shape the relationships between individuals or groups within and outside organizations as well as the relationships between organizations formed by individuals and groups, they play a central role in the process of innovation.

The emphasis on the institutional context in innovation could be traced to the ‘modularization’ of economic activity (Langlois 1988), which disperses information and knowledge relevant to innovation across the economy. Indeed, the basic function of institutions is to enhance information flow. The informational function of institutions served by industry associations, patent offices, regional development agencies, high levels of trust... etc., also reduces the uncertainty inherent within innovation activities (Porter 1990; Lundvall 1992; Whitley 2000; Tsang 2005; Athey et al. 2008; Philip and Jan 2008; Rysman and Simcoe 2008). As Edquist and Johnson suggest, ‘... in view of all the uncertainties and long lead times involved in innovation, it is not unreasonable to believe that without such institutional support innovations would be rare and the resource allocated to them would be insignificant’ (1997 p.53).

One of the key economic institutions is the state, which could channel resources into firm innovation. The role of the state has been one of the most controversial issues in Economics. Most scholars agree that the state has a certain role to play, but there is little agreement from laissez-faire to developmental state as to when and how it should act to stimulate innovation. While the well-functioning market mechanism provides a persuasive explanation for the success of the innovative US economies, the rise of Japan, Korea, Taiwan and Singapore, where the government has implemented strong industrial policy measures to create innovative world-class technology industries, has aroused interest in the active role of the government in innovation (Johnson 1982; Dore 1986; Amsden 1989; Chang 1994). Departing from this stream of study concerning the extent of government created incentives and resources that channel towards industrial innovation, Hall and Soskice (2001) argue that different government policy constitutes one of the key components contributing to the different nature of firm innovation across USA and Germany.

Though culture has been conceptually separated from institution by theorists such as Redding (2008), it will be interpreted in this paper as a socio-cultural institution that determines firm innovation. Kaasa and Vadi (2008 p.2) explain that, ‘culture affects innovation because it shapes the patterns dealing with novelty, individual initiatives and collective actions, and understandings and behaviours in regard to risks as well as opportunities’. However, culture is a multi-level concept that encompasses societal culture, local culture and occupational culture. For example, Schumpeter (1934 p.91) addresses ‘social habits and conventions’ as the driver for innovation among entrepreneurial firms. Saxenian (1994) compared the growth of the electronic and computer industry across the Silicon Valley and Route 128 in the USA and found that innovation was embedded in their local history and culture. Casson (1992), on the other hand, emphasised the importance of professional scientific culture for firm

innovation on the grounds that the work of professionals was associated with ‘a curiosity-driven desire to solve a problem to their own satisfaction’ (p.4).

Public Policy and Innovation

Despite ongoing debate on the role of state in economic growth, there is a broad consensus in relation to the rationales behind policies for innovation from Neo-classical Economists to Evolutionary Economists (Laranja et al. 2008). The neoclassical rationale for public intervention in innovation focuses on market and information-transmission failure, while systemic and evolutionary approaches acknowledge the need to avoid ‘systemic incoherence’ or ‘lock-in’ situations (ibid. p. 831). Furman et al. (2002) argue that the differences in ‘national innovation capacity’, which they defined as ‘the ability of a country to produce and commercialize a flow of innovative technology’, reflects variation in both ‘economic geography (e.g. the impact of knowledge and innovation spillovers among proximate firms) as well as cross-country differences in innovation policy (e.g. the level of public support for basic research or legal protection for intellectual property (IP)’ (p. 900). Technological opportunities are most likely to be associated with public policy in building innovation ‘infrastructure’ to stimulate knowledge production and transfer.

Given that the online gaming industry has a technology- and knowledge-intensive feature, we focus on the three policy issues related to product innovation. First, it emphasizes the role of entrepreneurship policy as a conduit of knowledge transfer (Audretsch 1995, Acs et al. 2005, Acs et al. 2009). Entrepreneurship provides a unique and valuable asset to economic prosperity by serving as an intermediary for the spillover and transfer of knowledge and ideas (Acs et al. ibid.). Second, it discusses innovation policy with emphasis on geographical agglomeration and clustering. It is a well-established fact that firms which are located within such agglomerations would tend to be more innovative than firms located elsewhere as knowledge has a strong tendency to circulate locally (Iammarino and McCann 2006). Finally, the effects of industry-specific policy on the online gaming sector are worth looking at. It provides us with a comparative view of Korea and the UK, since these two countries have different historical backgrounds in terms of the role of government.

Cultural Values and Innovation

As values underlie the conceptualization of culture (Hofstede 1991), there has been research concerning the relationship between values and innovation at different analytical levels. When looking at the different rates of innovation across nations, Shane (1993 p.59) concludes that, ‘an acceptance of uncertainty appears to be necessary, probably because innovation requires a tolerance of risk and change. Individualism seems to be important, perhaps because of its association with autonomy, independence and freedom.’ Hoffman and Hegarty (1993) propose that cultural values would impede firm innovation as top managers from different cultures emphasize different functional expertise (e.g. finance expertise in the UK and general management expertise in the Nordic countries). Within the setting of a single industry and top management teams that were dominated by home country nationals, Tsang (2002) found that the cultural value of individualism supported US personal computer firms’ product innovation in business software whereas the value of continuous improvement enhanced Japanese and Korean personal computer firms’ process innovation in DRAMs.

The prevalence of cultural values has further led to the study of the interplay between firm culture across national firms and product innovation. Three important points concerning culture at the firm level can be observed. First, innovative firm values have been discussed by theorists such as Quinn and Associates (1983 and 1988) and are widely acknowledged as critical firm resources. Second, founders (who are influenced by their respective national cultures) tend to shape their firms according to

enduring values which embody their cultural values (Pettigrew 1979; Giberson, Resick and Dickson 2005; Tsang 2006). Finally, the perpetuation of firm values is supported by the continuous process of attrition, where employees who do not share the values will leave the firm. (Hofstede 1985; Schneider 1987; Judge and Cable 1997; Krishnamurthy 2008).

Methodology

Based on the interpretive research paradigm, this research will adopt the qualitative methodology that focuses on detailed case studies of the most cited innovative Korean and UK online games firms. We used concepts and theories from the existing literature to increase understanding of the phenomenon of innovation within the Korean and UK online gaming industry. Primary data includes in-depth face-to-face interviews and reviews of public domain information of 8 leading online games firms in the two countries, which include NCsoft, Nexon, Webzen, Dragonfly, Codemasters, RealTime Worlds, Jagex and Monumental Games. Table 1 provides a snap-shot view of key data such as number of employees as well as examples of intellectual properties. All the aforementioned firms have forward integrated into games publishing and are embedded in regional high tech clusters.

The response rate for the face-to-face interviews which took place in the firms in 2007 was 38%. Semi-structured questionnaires guiding the interviews included questions designed to gather information on firm history, firm strategy, nature of external relationships and critical events. All interviews were taped and transcribed. In addition, longitudinal secondary data which included government publications, industry reports and news articles were also collected. They provided useful information regarding the personal history of founders, the evolution of the industry over time and the technological and marketing challenges facing firms.

Table 1: Case Study Online Games Firms in 2008

Firms	Year of establishment	No of employment	Example of innovative titles	Founders
<i>Korean Firms</i>				
Nexon	1994	600	Maple Story	Cheungju Kim, Jake Song
Dragonfly	1995	130	Special Force	Cheolsong Park
NCsoft	1997	2600	Lineage	Tackjin Kim
WebZen	2000	340	Mu Online	Namju Kim, Suyoung Lee
<i>UK Firms</i>				
Codemasters	1986	500	Archlord Darling	David Darling, Richard Darling, Jim Darling
Jagex	2001	400	Runescape	Andrew Gower, Paul Gower, Constant Tedder
RealTime Worlds	2002	300	All Points Bulletin	David Jones, Ian Hetherington, Tony arman

Korean case study

As mentioned in the earlier section, the rapid expansion of the ICT infrastructure in the late 1990s paved the way for the growth of online gaming firms in Korea. Two pioneering firms, shown in Table 1, founded in this period stand out - Nexon and NCsoft. Nexon was renowned in the history of the online gaming as it developed the first online graphic MMORPG Nexus: The kingdom of the Winds in 1996. This game was published a year before Electronic Arts' Ultima Online and was credited with popularizing the genre. Nexon's early innovative achievement underpinned its subsequent successes such as Kart Rider in 2001 and Maple Story in 2003. NCsoft, on the other hand, developed and published the mega-hit title Lineage in 1998. NCsoft's founder, Tackjin Kim, has a strong technological background in software and started his first company Hanmesoft, when he was a university student. Lineage's international success inspired young talents and encouraged them to start-up their own online gaming firms, using NCsoft as a role model. One of these companies was WebZen, which developed the 3D Mega-hit game, Mu Online in 2003. Unlike the other three Korean firms in this paper, Dragonfly started as a PC game-developer in 1995. Since extending its platform to the online format, it pioneered FPS online games such as Karma Online in 2002 and Special Force in 2004. In particular, the unexpected success of Special Force contributed to the diversity of the online games market previously dominated by MMORPGs.

Though the legal framework for the protection of intellectual property has not been and is still not favourable for game development in Korea, Korean online gaming firms have benefited tremendously from the government's entrepreneurial policy. The restructuring of chaebols as required by the IMF during the Asian Financial Crisis of 1997 has led to a change of policy focus from chaebols to innovative SMEs. Since then, fostering entrepreneurship for innovation is at the heart of SME policy and even the country's overall economic policy focus (OECD 2009). Among others, two policy measures are worth mentioning: better access to finance and the fostering of venture businesses. KOSDAQ was created and geared up for equity funding in the late 1990s, benefiting NCsoft and WebZen. Both firms secured financial sources from KOSDAQ to finance games development projects. It was reported that the two firms raised over US\$2,500 million even before their first trading at KOSDAQ in 2001 and 2003, respectively.

However, investment from venture capital, which was supported by the Korean government financially, was the most commonly used route for game financing. In particular, WebZen obtained US\$ 1 million in 2001 from a specialized game fund organized by Hansol Capital Investment for MU Online. As a result, the firm yielded a record increase of profit of 1,300 percent in the succeeding year. The financing of Dragonfly's most successful game, Special Force, was only made possible after it received US\$ 1 million from Next Venture Investment in its early stage of development in 2003. Since online gaming falls under the category of the software sector, online games firms are recognized as venture firms by the Law of Special Measures to promote Venture Business 1997, which is vital for firm success. This provisional Law contains highly favourable measures for high-technology based start-ups including additional tax incentives, lower standards for KOSDAQ, and special treatment for R&D programmes. Therefore, all four case study firms were recognized as ventures during their start-ups between the late 1990s and the early 2000s and were able to benefit from these policy measures.

One of the major intervention areas in innovation policy is facilitating networks between industry, academia and research institutions. Universities such as KAIST and SNU were indeed the birthplaces of the first generation of game developers and founders in the late 1990s. They had the special privilege

of early high-speed networks within different schools, which enabled students to develop games for fun and circulate them through the network at their leisure. Founders of NCsoft and Nexon were graduates of the two universities.

However, the level of technology and knowledge transfer from universities to gaming firms has been regarded as a 'missing link' despite the Technology Transfer Promotion Act in 2000 and the Government's efforts to promote it. Only Nexon took part in a consortium for the development of online simulation game systems in 1997. Linkages between gaming firms and universities are getting stronger in recent years, showing the importance of official recruitment from game-specific departments in universities and the commercial benefits of getting new ideas and feedback from young students. NCsoft announced that it agreed an MOU with Younsei Digital Game Institute and established a co-operation framework for developing its games by exchanging ideas, technologies, and experiences. Nexon also set up 'Nexon Game Track' with Korea Game Academy, Korea University, and Carnegie Mellon University. This programme intends to nurture future global game developers, to provide internship and overseas study in Carnegie Mellon, and is sponsored by the Korea Game Academy and Nexon.

With regard to industry-specific policy, the online games industry has not been a component of Korea's industrial policies (e.g. steel or automobile) and has attracted much less attention until recently. However, the establishment of Korea Game Industry Agency (then, Game Creation Support Centre) under the Ministry of Culture and Tourism in 1999 played a key role in supporting early game developers. The main task of KGIA is to build up the knowledge infrastructure for gaming firms such as providing game-specific information, export promotion, training game manpower and nurturing start-ups. KGIA's incubation centre gained its reputation by developing over 100 game firms including WebZen and Dragonfly while they were producing global-hit games. Another major contribution from KGIA is to run Korea Academy, a two-year game specific training program. This program has been sponsored by the Government since 2000; it has provided hundreds of graduate developers who joined major game firms such as NCsoft and Nexon.

Though the Korean culture has been widely characterized as collective by theorists since Hofstede's study (1980), Chang and Chang (1984, p. 12) describes Korea as 'individualism within a group setting' whereas Song (1990, p. 199) writes 'while Koreans are relatively group-oriented, they also have a strong individualistic streak like most Westerners.' Indeed, one out of four Koreans is Christians, a religion that emphasizes individual rather than collective relations with God. The rise of Christianity since the Second World War in Asia, has made Korea the largest Christian population behind the Philippines. It should also note that such a view concerning the individualistic streak among collectivism has not been a case among Korea's culturally similar neighbours such as Japan and China.

The success of leading Korean online gaming firms is based on their innovative games. With the exception of NCsoft who started as a business software developer, founders of the remaining three firms set up firms to develop games that they could share with friends or ex-colleagues. Cheongju Kim and Jake Song, cofounders of Nexon, used to attend the same class in KAIST. They built on their friendship and established the firm to exploit an earlier version of Nexus in 1994. Kim mentions that: 'Nexon's core competence is its firm value, which develops "new" games in any aspect... Since the game industry is selling fun, it is critical to create an environment that developers could enjoy their work freely and openly, and without an atmosphere of tight regulation' (Chosunilbo 2007). WebZen, the pioneer of 3D graphic online games, was founded by 2 ex-employees of MirinaeSoft that developed PC games titles. Since its formation, NamJu Kim has insisted WebZen maintained its leadership in 3D graphics technology and transferred its craftsmanship consistency to all WebZen games (ETNEWS 2005).

Unlike the Korean chaebols, the model of Korean online gaming firms is not diversified, gigantic in size and hierarchical. They follow the US game studio system and place great emphasis on creative ideas utilizing the flat, open and flexible structure. Moreover, the community of games professional tends to know one other well and even share information and ideas, revealing the sharing of innovative value and norms within the industry. However, these online gaming firms also draw from the individualistic streak of the Korean culture. For instance, job-hopping is very common among those working in the gaming sector even at the time when Korean firms widely adopted life-time employment for its core employees. Compared to other industries, the online gaming industry has attracted firms using non-traditional methods such as instant recruitment by portfolios and recommendations of 'communities of practice'. Indeed, Sungwon Ko, Development Manager of Special Force in Dragonfly, was employed on the spot when he demonstrated his amateur FSP game to the founder/CTO. Though there is the growing number of graduates and trainees from game degree courses from the university sector in recent years, programmers with formal education still accounts for only 1.86% in top 10 Korean gaming firms (ETNEWS 2009).

The importance of innovative value among Korean online gaming firms also means that the headquarters-subsidiary relations are different with those pursued by the chaebols. For instance, NCsoft's US subsidiary ArenaNet was assigned to develop its own series with complete freedom. Its first title Guild Wars was an instant No. 1 seller around the world, with more than 250,000 accounts created in the first week after the game's launch (ArenaNet 2009). Similarly, Nexon's WiZet and devCAT are also given authority to handle its creative development such as Maple Story and Mabinogi respectively.

UK case study

Though three of the UK online gaming firms were created in the 2000s, their founders were industry veterans who have accumulated work experience in the video games sector with indigenous firms or foreign firms. David Jones of RealTime Worlds, for instance, was behind the successful, original game series Grand Theft Auto and Lemmings. These games each had cumulative global sales of over 20 million units. The other co-founders of RealTime Worlds were previously Managing Directors of Sony Europe and Directors of Development and Acquisition for Nintendo America. However, the Gower brothers in Jagex were games enthusiasts who identified new market opportunities for online games. As teenagers, Andrew and Paul Gower created video games for Atari ST under Cunning & Devious Games and later Java Games on the Games Domain web site. They wrote and hosted the original version of RuneScape in Andrew Gower's house while he was an undergraduate student at the University of Cambridge. The game was an instant success, and together with Constant Tedder, they established Jagex in December 2001. This pattern of firm formation was, therefore, similar to that of Codemasters during 1986 where the Darling brothers set up the firm in their father Jim Darling's barn. Codemasters has since then developed and published successful titles such as the Colin McRae Rally series and has expanded at their original site in Lemington Spa. It became a publisher of online games in 2006 with RF Online, which was developed by Korea's CCR. Since then, Codemasters has hosted and serviced its online games at the Lemington Spa HQ.

The four UK firms have benefitted from the talent pools available in the UK video games industry. For example, the closure of Visual Science in Dundee in 2006 (as a result of its publisher terminating the contract) paradoxically provided opportunities for its neighbour RealTime Worlds to expand. In addition, firms in Southern England such as Codemasters were also able to recruit staff by offering relocation packages. The availability of talent further enhanced these firms' production in areas such as graphics, sound... etc.

In terms of public policy framework, the UK government has generally adopted a market approach in the gaming industry. One of the industry observers commented that because of the negative perceptions associated with the industry such as violent behaviour as well as passive consumption and obesity, the government was rather reluctant to be involved in providing financial support. Nevertheless, online gaming firms could apply for R&D tax credits, which were implemented as a result of lobbying efforts by the industry association TIGA. The UK government further suggested in 2008 that it might provide the industry 'the same favourable tax treatment as the UK film industry' in response to its French counterpart's provision of cultural tax relief to games development firms.

Scotland, however, has a different model and is proactive in terms of encouraging firm formation and clustering. Financial investment (usually 5 % equity) undertaken by Scottish Enterprise is not uncommon in the technology sector. In addition, firms in the deprived city of Glasgow are eligible for grants from the Regional Selective Assistance Agency under the EU framework. Indeed, the Dundee-based RealTime Worlds received early funding from Scottish Enterprise in 2004. The joint US\$1.75 million investment by Scottish Enterprise and CIM Venture Fund for Creative Industries was used 'to deliver new technologies, including two upcoming titles, one of which will be the company's first offering into the online games market' (Business Wire 2004).

The most critical innovation policy associated with UK online games development is related to intellectual property. The UK has well established IP laws and a vigorous legal framework to protect innovative ideas and designs, which allows firms to appropriate economic rents in conjunction with product innovation. As to the extent of the knowledge spill-over aspect of the innovation policy, the impact could be considered insignificant. In a recent roundtable discussion among Jagex and other Cambridge based gaming firms, Frontier Development acknowledges that, though there is now a critical mass in development and in adjacent technical areas in the city, games development firms tend not to have strong linkages among them or with Cambridge University. For example, Ninja Theory's linkage with Sony Cambridge existed only during their period of joint development work. Jagex reiterates this point and mentions that its linkage with the university concerns Andrew Gower's academic project that subsequently evolved into Runescape and its role in student work placement schemes.

However, individual links seem to play a role within the agglomeration aspect of the innovation policy. Individuals serve to transmit knowledge when they change jobs or exchange information informally. Frontier Development describes the individual links in Cambridge as: 'A lot of people meet up in pubs. A lot of people know each other socially. I am sure there's a lot of gossip going on'. In addition, Monumental Games was created by ex-Climax employees, i.e. the General Manager and Technical Director of Climax Online. As the Technical Director, Loscalzo had not only worked on Warhammer Online, but also overseen the MMO game development technology platform Leviathan. Climax closed its online games studio in Nottingham after GamesWorkshop terminated the Warhammer project. The current CEO of Monumental Games, Rix Alexander, who had been looking for an opportunity to set up a firm took the risk and established the firm with Loscalzo. The founders not only benefitted from their accumulated online games development expertise in Climax, they were also able to persuade the experienced, entrepreneurial founder of Climax to serve on the start-up's management board.

Though some English universities have provided games development degree courses in recent years, their initiatives could not be considered as industry-specific policy as they launched these programs independently and without government coordination. However, the Scottish government has been more proactive and recently invested £3 million in the University of Abertay, Dundee, to facilitate the first UK Centre for Computer Games Excellence. The Vice Chancellor of the university made the following statement about the investment by the Scottish Government: 'It recognizes that Scotland can

be a global leader in this sector, and that Abertay can drive that ambition by providing graduates with the necessary world-class skills to succeed.’ It should be noted that Abertay University has won an industry award for its contribution to games education in the UK; however, UK games programming courses in general have been continuously criticized by indigenous and multinational firms in terms of content.

According to the cultural studies undertaken by Hofstede (1980), Trompenaars (1992), Schwartz (1992) and House et al. (2004), UK is an individualistic country where there is great emphasis on the uniqueness of each human being. Booth (2007 p.339) explains: ‘An example of the individualism of the British is their attitude toward obeying the law when it comes to matter of conscience. In a recent survey (Brook and Cape 1998) only 36% would obey the law if it clearly went against their conscience, where 57% would follow their conscience rather than the law’.

Innovation is highly regarded in the individualistic culture within the UK. For example, the renowned BRIT Awards and the BAFTA Awards recognizes the creativity in popular music, film and television production annually. Innovation has been and is the driving force behind the self-selected games development community. This community is a self-selected group, in a sense that, those who could not cope with the pay and work condition in the industry tend to leave on their own accord, and join the business software sector or other professional sectors after a year or two. Overall, individuals engaged in games development are games enthusiasts that take pride in the completion of innovative projects. In addition, this self-selected group also works in an uncertain market environment; for example, those with over twelve years of experience have witnessed the boom and bust of the industry and have often have been made redundant during their working lives.

Indeed, the founders of the four UK firms are widely considered as innovative individuals. For example, the Darling Brothers ‘were famous for putting ringing endorsements of their games on the packaging’ in the early 1980s, which were ‘usually quotes from the creators of the game or the Darling brothers themselves’. David Jones had previously founded DMA in 1987 as he felt that ‘there were no established developers as such’ in Scotland he could work for. DMA’s titles were ‘praised for their polished gameplay and compelling design’. It developed Lemmings and Grand Theft Auto before it was acquired by Gremlin Interactive.

The four firms have also illustrated the value of innovation. For example, Jones explains the purpose of RealTime Worlds as: ‘We have a desire to create games with strong online hooks. We feel that it is getting harder to innovate with single player gaming... It is really hard to find games that really give you the sense of excitement, adventure and innovation, that we had in the early days... We want to build games that start to offer some of these new and fresh ideas’ (de la Fuente 2004). Codemasters’ innovative culture has led to intense focus on creative ideas generated internally and externally. It invites all employees to submit innovative product ideas for consideration every week, and the incentive to do so is the prospect to participate in the associated royalty pool when the title created becomes successful. Codemasters’ A&R Group also interfaces with games developers and is always searching for talents.

Discussion

Narula (2003, 56) states that ‘Institutions create the milieu within which innovation is undertaken and establishes the ground rules for interaction between the various economic actors, and represents a sort of a culture.’ The Korean and UK case studies have shed light on the institutional sources of innovation, namely public policy and cultural value. The role of public policy towards early product innovation differs across Korea and the UK. The strong government support towards entrepreneurship

has enabled Korean firms to enter and compete in the global online games industry since the mid-1990s, which was ahead of UK firms' entry in the online gaming sector.

Nevertheless, the Korean government's support could be contrasted with Scottish Enterprise's initiative to foster technology clusters such as Dundee for games development. In terms of geographical agglomeration and clustering, both Korean and UK firms compete independently and do not exhibit strong regional linkages. The absence of inter-firm linkages seem to support the notion that research and development 'is moving out of firms' and universities' R&D labs, and becoming more broadly distributed among innovative, independent individuals' (Lettl et al. 2009, 243). As knowledge is critical for innovation, one of the puzzling issues is therefore how these individuals manage their knowledge bases within an industry that evolves at a rapid pace since its inception.

Though the protection of intellectual property rights differ across Korea and UK, the ineffective system in Korea has not hindered the emergence of online gaming firms during the 1990s. The reason is that the innovative software was stored in the publishing firms' official servers and was not targeted by illegal online game domain counterfeiting operation. Hence, online game developers and publishers such as NCsoft could appropriate the economic rents in relation to their innovation within a less than ideal legal framework. However, the emergence of pirate servers that publish illegal version of online games in Asia in recent years has threatened Korean firms future profitability as a high proportion of their sales revenues are derived from the region. The issue of intellectual property rights therefore might deter their future growth in their traditional stronghold such as China and Korea.

The Korean case has highlighted the role of industry-specific policy in accelerating the growth of globally competitive firms. Similar success can be seen in Scotland where the University of Abertay has contributed to graphic design and games development towards the UK games industry. However, there has been mixed responses in relation to the university-led (rather than government-led) games development courses that have appeared in the UK during the last decade. Multinational firms such as E.A. have indeed openly proclaimed that these courses did not provide graduates with the skill most critical for programming.

Though Korea and UK display different prime cultural value, innovative firm value are shared by leading Korean and UK online gaming firms and are critical source of product innovation. The Korean case supports the notion as writers have suggested, of the individualistic element within Korean culture, which stands out in Eastern Asia. It seems that founders of knowledge-intensive Korean online gaming firms, which have grown in the 1990s, were able to create as a model, a new industry utilizing the firm culture of American firms eg. Electronic Arts. The fact that these founders were able to rebel against existing orthodoxy within Korean's Confucian based culture and set up a business that targeted interactive entertainment also illustrates that they belong to a non-conforming group within the collective culture.

Conclusion

Previous studies on inter-country differences on innovation have focused on the role of formal institutions. In this paper, we have attempted to integrate the role of both formal and inform institutions. It shows that the combination of public policy initiative and the prime cultural value has facilitated the rapid growth of online gaming firms e.g.in Dundee and Seoul. Summing up, the success of Korea and UK in online gaming firms draw upon different institutional framework. The case of Korea's leadership in online games suggest that given the appropriate policy support, it is possible to leapfrog the console gaming sector and enter the emerging sector of online gaming. On the other hand, the relative late entry of the UK into online games might be due to the government's lack of commitment in supporting the somewhat controversial games industry, which is paradoxically linked to

the high profile music industry, the advertising industry as well as the television and film industry. Finally, this paper shows both innovative UK and Korean firm value, regardless of their different socio-economic contexts, plays an important role in generating creativity and provides firms ownership advantages.

References

- Acs Z., Audretsch D., Braunerhjelm P., Carlsson, B. (2005). The knowledge spillover theory of entrepreneurship, CEPR Discussion Paper no. 5326.
- Acs, Z., Audretsch D., Strom R. (2009). Introduction: Why entrepreneurship matters. In Acs, Z. A, Audretsch D. B, and Strom R.(eds). Entrepreneurship, growth, and public policy. Cambridge University Press, New York.
- Amabile, T.M. (1997). Motivating Creativity in Organizations, California Management Review, Fall.
- Amsden, A. 1989. Asia's next giant: South Korea and late industrialization. Oxford University Press, New York.
- Athey, G., Nathan, M., Webber, C., Mahroum, S. (2008). Innovation and City. Innovation: Management, Policy and Practice, 10, 156-169.
- ArenaNet. Accessed at <http://www.arenanet.com/about>. [10 March 2009].
- Audretsch D. (1995). Innovation and Industry Evolution. MIT Press, Cambridge.
- Booth, S. (2007). Inspirational Variations? Culture and Leadership in England in J.S. Chokar, F.C. Brodbeck, R.J. House (eds) Culture and Leadership Across the World: The GLOBE Book of in-depth studies of 25 societies. Lawrence Erlbaum.
- Business Wire. (2004). Real Time Worlds Receives Next-Stage Funding for GBP 1.05 million. May 13 2004.
- Casson, M. (1992). Culture Factors in Innovation: An Economic Analysis. Department of Economics, University of Reading, Discussion Paper in Economics, Series A, No 259.
- Chang, C.S., Chang, N.J.. (1994). The Korean Management System: Cultural, Political, Economic Foundations. Quorum Books, London.
- Chang, H. (1994). The Political Economy of Industrial Policy. Macmillan, Basingstoke.
- Chosunilbo. (2007). Interview with Cheungju Kim - I am a failure as CEO. I am not good at organization management. Accessed at http://news.chosun.com/site/data/html_dir/2007/04/26/2007042601126.html. [20 March 2009].
- Dela Fuente, D. (2004). Exclusive: David Jones Interview Feature. Accessed at <http://www.totalvideogames.com/Realtime-Worlds/fature-5092.html> (26 February 2009)

- Dore, R. (1986). *Flexible Rigidities: Industrial Policy and Structural Adjustment in the Japanese Economy 1970-1980*. Stanford University Press, Stanford.
- Edquist, C., Johnson, B. (1997). *Institutions and Organizations in Systems of Innovation* in Charles Edquist (ed.) *Systems of Innovation: Technologies, Institutions and Organizations*. Pinter, London.
- ETNEWS. (2005). We are creating myths of Digital Contents: 5. Namju Kim, CEO. Accessed at <http://www.etnews.co.kr/news/detail.html?id=200503020012>. [20 March 2009].
- ETNEWS. (2009). Truth and falsehood: Game-specific courses for ten years. Accessed at <http://www.etnews.co.kr/news/detail.html?id=200807240134>. [24 March 2009].
- Freeman, C., Soete, L. (1997). *The Economics of Industrial Innovation*. Routledge, London.
- Furman, J., Porter M., Stern, S. (2002). The determinants of national innovative capacity. *Research Policy* 31, 899-933.
- Giberson, T.R., Resick, C.J., Dickson, M.W. (2005). Embedding Leader Characteristics: An Examination of Homogeneity of Personality and Values in Organization. *Journal of Applied Psychology*, 90(5), 1002-1020.
- Hall, P.A., Soskice, D. (2001). *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*. Oxford University Press, Oxford.
- Hoffman, R.C., Hegarty, W.H. (1993). Top Management Influence on Innovations: Effects of Executive Characteristics and Social Culture, *Journal of Management*, 19(3), 549-574.
- Hofstede, G. (1980). *Culture's Consequences: International Differences in Work-related Values*. Sage Publications, Beverly Hills.
- Hofstede, G. (1985). The Interaction Between National and Organizational Value Systems, *Journal of Management Studies*, 22(4), 347-357.
- Hofstede, G. (1991). *Cultures and Organizations: Software of the Mind*. Harper Collins Business, London.
- House, R.J., Hanges, P.J., Javidan, M., Dorfman, P., Gupta, V. (2004). *Culture and Leadership and Organization: The GLOBE Study of 62 societies*. Sage.
- Iammarino, S, McCann, P. (2006). The structure and evolution of industrial clusters: Transactions, technology and knowledge spillovers, *Research Policy*, 35, 1018-1036.
- Information Telecommunication Union, (2009). *Measuring the information Society - the ICT development index*. ITU, Geneva.

- Johnson, C.A. (1982). *MITI and the Japanese Miracle: the growth of industrial policy 1925-1975*. Stanford University Press, Stanford.
- Judge, T.A., Cable, D.M. (1997). Applicant Personality, Organizational Culture and Organizational Attraction. *Personnel Psychology*, 50, 359-393.
- Kaasa, A., Vadi, M. (2008). How does Culture contribute to innovation? Evidence from European Countries. The University of Tartu Faculty of Economics and Business Administration Working Paper No 63-2008.
- Krishnamurthy, B.V. (2008). The Battle against Executive Attrition. Accessed at <http://discussionleader.hbps.com/krishnamurthy/2008/07the-battle-against-executive-a.html>
- Langlois, R.N. (1988). Economic Change and the Boundaries of the Firm, *Journal of Institutional and Theoretical Economics*, 144(4), 635-657.
- Laranja, M., Uyarra, E., Flanagan, K. (2008). Policies for science, technology and innovation: Translating rationales into regional policies in a multi-level setting. *Research Policy* 37, 823-835
- Lettl, C., Rost, K., von Wartburg, I. (2009). Why are some independent inventors 'heroes' and others 'hobbyists'? The moderating role of technological diversity and specialization, *Research Policy*, 38, 243-254.
- Lundvall, B.A. (1992). *National Systems of Innovation: Towards a theory of Innovation and Interactive Learning*. Pinter Publishers, London.
- Narula, R. (2003). *Globalization and Technology*. Polity, Cambridge.
- North, D. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge University Press, Cambridge.
- OECD, (2009), *Fostering Entrepreneurship for Innovation*. OECD, Paris.
- OECD, (2001). *The Development of Broadband Access in the OECD Countries*. OECD, Paris.
- Pavitt, K. (2005). Innovation Processes in J. Fagerberg, D.C. Mowery and R.R. Nelson (eds) *The Oxford Handbook of Innovation*. Oxford University Press, New York.
- Pettigrew, A.M. (1979). On Studying Organizational Cultures, *Administrative Science Quarterly*, 24, 570-581.
- Porter, M.E. (1990). *The Competitive Advantage of Nations*. Macmillan, London.
- Quinn, R.E., Rohrbaugh, J. (1983). A Spatial Model of Effectiveness Criteria: Toward a Competing Values Approach to Organizational Analysis, *Management Science*, 29: 363-377.

- Quinn, R.E. (1988). *Beyond Rational Management: Mastering the Paradoxes and Competing Demands of High Performance*. Jossey-Bass, San Francisco.
- Redding, G. (2008). Separating Culture from Institutions: The Use of Semantic Spaces as a Conceptual Domain and the Case of China, *Management and Organization Review*, 4(2), 257-289.
- Saxenian, A. (1994). *Regional Advantage: Culture and Competition in Silicon Valley and Route 128*. Harvard University Press, Cambridge.
- Schneider, B. (1987). The People Make the Place. *Personnel Psychology*, 40, 437-453.
- Schumpeter, J.S. (1932). *The Theory of Economic Development* (trans R. Opie). Harvard University Press, Cambridge.
- Schwartz, S.H. (1992). The Universal Content and Structure of Values: Theoretical Advances and empirical tests in 20 countries in M. Zanna (ed) *Advances in Experimental Social Psychology*. Academic Press, New York.
- Shane, S. (1993). Cultural influences on national rates of innovation. *Journal of Business Venturing*, 8, 59-73.
- Song, B.N. (1990). *The Rise of the Korean Economy*. Oxford University Press, Hong Kong.
- Trompenaars, F. (1992). *Riding the waves of culture: understanding diversity in global business*. Irwin, New York.
- Tsang, D. (2002). *Business Strategy and National Culture: US and Asia Pacific Microcomputer Multinationals in Europe*. Edward Elgar, Cheltenham.
- Tsang, D. (2005). Growth of Indigenous Entrepreneurial Software Firms in Cities. *Technovation*, 25, 1331-36.
- Tsang, D. (2002). *The Entrepreneurial Culture: Network Advantage within Chinese and Irish Software Firms*. Edward Elgar, Cheltenham.
- Whitley, R. (2000). The Institutional Structuring of Innovation Strategies: Business Systems, Firm Types and Patterns of Technical Change in Different Market Economies, *Organization Studies*, 21(5), 855-886.
- Williamson, O.E. (1981). The economics of organization: the transaction cost approach. *American Journal of Sociology*, 87(3), 548-77.

The effectiveness of cooperative programs between large and small businesses in the Korean steel industry

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Though many theories emphasize the importance of the cooperative relationships between firms, there have not been enough empirical studies about the performance of cooperation. This makes firms difficult to focus on the most effective programs to the characteristics of the relationship.

Through investigating the survey data, this study figures out the following three findings. 1) SMEs do not regard committees and consulting centers as important and effective cooperative programs due to the lack of immediate benefits. 2) Benefit sharing activities can be mutually beneficial when SMEs have other sources to make up the reduced sales volume. 3) When SMEs provide services rather than products, the human resource oriented programs like employee training are more effective than technology-oriented programs.

Track: 9. Relationships between Large and Small Firms

E-Service Quality, Relationship Strength, and Satisfaction between Large Supplier and Small Dealers: The Experience from Mobile Phone Industry in Taiwan

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The B2B relationships have widely concerned by practitioners and academics in recent years. Especially in the e-commerce era, e-service quality from the service providers has become one of the crucial factors to the business relationships. Thus, this study investigates the influences of e-service quality and relationship strength on dealer satisfaction between large supplier and small dealers in the mobile phone industry in Taiwan. From the results of statistical analysis, e-service quality from large supplier would accelerate relationships to small dealers. Moreover, high relationship strength would enhance not only economic satisfaction but social satisfaction to dealers.

Keywords: B2B relationship, e-service quality, relationship strength, dealer satisfaction

Track: 9. Relationships between Large and Small Firms

ENTREPRENEURSHIP and ECONOMIC DEVELOPMENT
Tracking the “Schumpeterian Centennial”

Underlying hypotheses and observations, Schumpeter states in the early German edition of his seminal “Theory of Economic Development” (1912)¹, were not invented or merely fictitious, but taken and gleaned from economic reality in contrast to – then - prevailing equilibrium oriented and essentially “static” views of interpreting the market based capitalist process as “conditioned by given circumstances” (as he subtitled the very first chapter. Thus, the telling motto right on the title page of the first edition: “Hypotheses non fingo”. (As such never appearing again in any later issues, including the English translation of 1934; see Annexes 1 and 2.)

From hindsight one might be left wondering as to what, in fact, makes Schumpeter’s early conceived vision of the leadership role of the entrepreneur in “economic life” still so very topical, if not to say outright indispensable for explaining the dynamics

¹ Newly edited and reprinted with an “Introduction” by J. Roepke and O. Stiller (2006). References and quotations in the following are being identified, respectively: if relating to the earlier German editions (in particular, the first or second) as “Theorie” followed by year; if relating to the English version as “Theory” (1934 or reprints). Quotations translated from the German editions being either omitted or referred to only passim in the 1934 English version, are marked “transl. J.H.P.”

of the “capitalist” system. In recognizing role and importance of entrepreneurially driven innovation with related forces of “creative destruction” as intrinsically market based phenomena, Schumpeterian notions indeed seem to have gained new momentum in today’s economic debate for the very understanding of entrepreneurial by driven systems, including competitive entrepreneurial behaviour with emphasis also on related entrepreneurship education². All that against a bibliographical background of his “Theory” which - intermittently nearly forgotten, widely misread or misinterpreted - took fully 14 years until its second, in parts radically revised and modified edition in 1926.³

Schumpeter explicitly voices his irritation in the foreword to the second edition that readers of the earlier version obviously “mistook” the book as a kind of “history” of economic development in line with the – methodologically more descriptive – German “Historical Schools” to which, nonetheless, the very flow and partly rather verbose style of the original text undoubtedly shows a certain affinity. In restating and emphasizing the theoretical thrust of his argument, the somewhat lengthy

² Witness the numerous university chairs and programs on “entrepreneurship” having sprung up, and still expanding, over the past decades. Cf. more recently also Thomas K. McCraw (2007) with extensive references to Schumpeter’s “Legacy”; or the relevance of innovative elements and factors in the context of the New (endogenous) Growth Theory (cf. P.M. Romer, 1990, et al.), as well as distinct Schumpeterian traits in the relatively new discipline of “Evolutionary Economics”.

³ As essentially the basis for the subsequent English translation, published 1934 at Harvard after the 3rd and 4th - both largely unchanged - German printings (1931, 1934).

subtitle⁴ was added from the second edition onwards (and retained also in the English translation) to bring home the very essence together with substantial revisions to the core second chapter on “The Fundamental Phenomenon of Economic Development”.⁵

In the context of such revisions Schumpeter, in our view, perpetrated two “sins”: Firstly, by trying to schematize, thereby narrowing down and kind of “sterilizing”, in the second chapter the very role of the entrepreneur to the meanwhile famous, again and again being referred to, “five cases” in “the carrying out of new combinations”;⁶ as such conveying a rather bloodless, sort of descriptive “listing” of implied entrepreneurial traits and “characteristics” lending itself to a rather limited, yet tempting interpretation as a sort of proxy for defining the “Schumpeterian entrepreneur”, quite in contrast to the full blooded picture so vividly painted in the original version refraining from such schematization. Secondly, by omitting the entire seventh chapter (from 1926 onward)⁷, wherein Schumpeter tried to put his vision and overall conceptualization in a systemic context by way of a “holistic” topping off in form of a socio-economic synopsis to the expositions in the preceding chapters. It

⁴ In German: „Eine Untersuchung über Unternehmergewinn, Kapital, Kredit, Zins und den Konjunkturzyklus”; in English: „An Inquiry into Profits, Capital, Credit, Interest and the Business Cycle“ („Profits“ to be understood entrepreneurial or “private”).

⁵ In German: “Das Grundphaenomen der wirtschaftlichen Entwicklung” (Theorie 1912, 103-198; 1926, 88-139; Theory 1934, 57-94).

⁶ Theorie 1926, 100f.; Theory 1934, 66, by contrast to the German version not explicitly being “listed”, but less conspicuously integrated in the text as such (see Annex 3).

⁷ In German: “Das Gesamtbild der Volkswirtschaft“ (“Overall View of the Economy“, transl. J.H.P.), Theorie 1912, 463-548.

seems a pity that, especially the English reader, remains deprived of a possibly still more comprehensive and deeper understanding of the very thrust of the Schumpeterian message even if, admittedly, this chapter (of nearly 90 pages in the German original) might appear less rigorously argued.

A “Theory” against the mainstream

In order to fully appreciate the very boldness of Schumpeter’s message, his “Theory” needs to be viewed in light of the prevailing mainstream of economic thought at time of its first publication. Classics and Neoclassics, notably of the Viennese marginal (“Grenznutzen”) tradition with Eugen v. Boehm-Bawerk and Friedrich v. Wieser as principal advisers to Schumpeter’s habilitation at the Vienna University⁸, clearly were dominating the discipline’s common body of knowledge; and so was Marx’ quite different, non-market based (“socialist”) interpretation of the economic process, all of which Schumpeter was well familiar with, while more specifically having been exposed, of course, to neoclassical thinking in the Viennese academic “style”. His habilitation thesis as mentioned, submitted in 1908, indeed was devoted to a theoretical treatment and discussion of the “state of the art” at the time,

⁸ *Based on his first book, entitled: „Das Wesen und der Hauptinhalt der theoretischen Nationaloekonomie”, Leipzig 1908 („The Nature and Content of Theoretical Economics”), repeatedly also being referred to (as „Wesen“ for short) in Schumpeter’s subsequent „Theorie“.*

including a rather shrewd reception and re-interpretation of Walrasian equilibrium as an exposition of “pure economics” on essentially static grounds.⁹

These scientific environs and ingredients are important to note as points of departure in Schumpeter’s own “Theory”, wherein his critical stand against the prevailing “mainstream” finds ample expression right in the first chapter¹⁰ by pointing at the intrinsically static, “circular flow”-type view of “economic life” and voicing his discontent over the obvious deficiency of such theorizing to adequately capture and explain the underlying dynamics of the market based “capitalist” process. By contrast, he explicitly commends Marx as - with his (dialectic) methodology - being able to indeed grasp the intrinsically dynamic nature of “economic development.”¹¹

To mention as of specific relevance in this very context is Eugen v. Boehm Bawerk’s profoundly neoclassical - and pointedly anti-Marxian - “The Positive Theory of

⁹ Cf. Walras, L.: *Elements d’économie pure, ou théorie de la richesse sociale*, Lausanne 1874-77; English translation by Jaffe, W.: *Elements of Pure Economics*, Homewood, Ill.-London 1954.

¹⁰ Entitled “The Circular Flow of Economic Life as Conditioned by Given Circumstances”, *Theory* 1934, 3-56; in German: “Der Kreislauf der Wirtschaft in seiner Bedingtheit durch gegebene Verhältnisse”, *Theorie* 1912, 1-102. Already the “Physiocrats”, Schumpeter argues, in grasping “the fact of circular flow ... ipso facto describe a static economy ... And this remained the objective of pure economics to our days.” Also with A. Smith, “wherever his arguments rest on firm ground, his view is essentially static ... Wherever he speaks of progress, he never explains this on the basis of economic processes in themselves ...” (*Theorie* 1912, 92ff., transl. J.H.P.)

¹¹ „The only major attempt toward the problem of development is the one of Karl Marx ... He strived to treat the development of economic life itself on basis of economic theory. His accumulation, his immiserization, his crisis theories follow from pure economic reasoning ... aiming at the evolution of economic life as such ... not just its circular flow ...” (*Theorie* 1912, 98; transl. J. H. P.) And if he “had not been more than a purveyor of phraseology, he would be dead by now. Mankind is not grateful for that sort of service and forgets quickly the names of the people who write the librettos for its political operas.” (*Schumpeter*, 1942, 5.)

Capital"¹² as for Schumpeter yet another bone of contention and point of critical departure since, despite its erudite theoretical reasoning, again resting on essentially "static" grounds and, therefore, bound to miss the intrinsic nature of "capitalist" dynamics. (For an ingenious early re-interpretation of "The Positive Theory" with Boehm-Bawerk's subtle theorizing on the "round aboutness" of capitalist accumulation by his contemporary Swedish economist Knut Wicksell see graphical illustration, Annex 4.)¹³

It is against such background and dissatisfaction with mainstream "circular flow" concepts as prevailing then, that Schumpeter's own "Theory" evolved and took shape: as a theoretical - and in its endeavor similar to Boehm Bawerk's preceding, albeit "static" - attempt to, for his part, provide a non-Marxian dynamic interpretation of capitalist "development" driven by its inherent systemic forces "from within".¹⁴

¹² Translated with a "Preface" by W. Smart, London-New York 1891. German original: "Positive Theorie des Kapitals (1889), as Vol. 2 of "Kapital and Kapitalzins"; a center piece til today of neoclassical capital theory, which propelled its author to international fame. Boehm-Bawerk by the way, as Schumpeter states himself, never really approved of his "Theory" (cf. Theorie 1926, "Vorwort").

¹³ Cf. Wicksell, K. (1893).

¹⁴ "By development, therefore, we shall understand only such changes in economic life as ... arise by its own initiative, from within." (Theory 1934, 63.) "Development in our sense is then defined by the carrying out of new combinations." (Ibid., 66; with the "five points" to follow, see Annex 3.)

We shall try in the following to pinpoint – against such background - what seems to emerge as a kind of “hidden agenda” behind Schumpeter’s vision rendering it such lasting a legacy for interpreting capitalist development and its dynamics.

Toward entrepreneurially driven “capitalism”

In taking a profoundly critical stand against mainstream “statics”, Schumpeter in his “Theory” endeavors to depict market based (long term) “economic development” as an ever changing - and as such never toward equilibrium tending - process of “economic life” generally. This, in fact, constitutes the all pervading thrust of his argument; and indeed no one – apart from Marx in his systemic theorizing – has done so before in a similarly rigorous fashion which, no doubt, lends such seminal and lasting fascination to his “Theory”.

The essence of capitalist dynamics, in Schumpeter’s view, thus boils down to a continuous pursuit of “carrying out ... new combinations”¹⁵ as an entrepreneurially driven process which proves “that economic life never is static; it lies in the very nature of development.”¹⁶ The question then arises: who is “carrying out”, what stands for the “new” and how are “new combinations” being carried through?

¹⁵ *Theory* 1934, 66.

¹⁶ *Theorie* 1912, 162 (transl. J. H. P.).

Schumpeter's straightforward answer to that is: the entrepreneur, being depicted and singled out in the very "Schumpeterian" meaning (or "in our sense" as he repeatedly emphasizes). In any given economic moment or situation, so his argument, there exist "numerous possibilities for new combinations", yet only a small group has the drive and takes "leadership" to, in fact, carrying them through, while "most do not see them".¹⁷ Thus, "... the carrying out of new combinations is a special function ... of people who are much less numerous than all those who have the 'objective' possibility of doing it. Therefore, ... entrepreneurs are a special type, and their behavior ... the motive power of a great number of significant phenomena."¹⁸

Hence it is, with Schumpeter, the entrepreneur - and only he - who "'leads' the means of production into new channels ... drawing other producers ... after him", thereby rendering "a service, the full appreciation of which ... is not so easily understood by the public at large".¹⁹

From there it follows, "the most typical incorporation of future value creating potentials is a new enterprise ...", and the "specific type" as characteristic for "a special class of economically active individuals has taken on a name of its own,

¹⁷ *Theorie* 1912, 162 (transl. J. H. P.).

¹⁸ *Theory* 1934, 81f.

¹⁹ *Ibid.*, 89; yet, such „leadership in particular ... must be distinguished from ‚invention‘. As long as they (inventions, J. H. P.) are not carried into practice, inventions are economically irrelevant.“ (*Ibid.*, 88) However: „In as much as the carrying out of new combinations constitutes form and substance of development, so much so is the leader's initiative its driving force.“ Alas, not all are „equally far sighted and energetic ...“ (*Theorie* 1912, 162, footnote; transl. J.H.P.)

namely **entrepreneur**.²⁰ *The entrepreneur as the driving or “leading” force in economic life, be it as “business founder”²¹ or as “creative innovator” who through “anti-hedonist”²² activity and initiatives creates future values. “They (these values, J.H.P.) correlate with new combinations, ... new combinations translated in value terms ... the shadows of things to come ...”²³*

In carrying out new combinations, the entrepreneur, firstly, singles out from a “multitude of various moments ... the related right decision ... which is given to few people only with specific capabilities, and secondly, carries them through. These are the characteristics of our entrepreneur, of our man of action. They are inseparable and of equal importance. And the result is economic development, progress”²⁴; development or progress being triggered by “our type” of (Schumpeterian) entrepreneur.

²⁰ *Theorie 1912, 170f. (transl. J. H. P.); or somewhat more barren in the English version later on: „The carrying out of new combinations we call ‘enterprise’; the individuals whose function it is to carry them out we call ‘entrepreneurs’.” (Theory 1934, 74)*

²¹ *In merciless Schumpeterian understanding: If a business founder merely continues to manage his „enterprise ... in simply a static way, he ceases to be an entrepreneur!”. His very nature “is linked to creating (to combining, J. H. P.) something new.” (Theorie 1912, 174, footnote; transl. J. H. P.)*

²² *Theory 1934, 94; the entrepreneur as – in a “non-hedonist” way - ever being absorbed by “the joy of creating, of getting things done, or of just exercising ... ingenuity.” (Theory 1934, 93)*

²³ *Theorie 1912, 170 (transl. J. H. P.).*

²⁴ *Theorie 1912, 177 (transl. J. H. P.).*

Uncovering the subtlety of implied “dialectics”

*The role of the Schumpeterian entrepreneur, as inseparably being geared to the very essence of “economic development”, thus resembles a kind of “hidden” form of what might be called Schumpeterian “**dialectics**” for interpreting the dynamics of capitalist development from a (non-Marxian) systemic perspective.*

*The market system itself, under “given circumstances”, thereby constituting the **thesis**; the entrepreneur in the Schumpeterian sense as the driving (also the “creatively destructive”) force being the **antithesis** to the system, ever striving to “out compete” given circumstances by way of new combinations and thus - temporarily at least - trying to be or to become a kind of “monopolist”;²⁵ finally, the **synthesis** of such a scenario to be seen in prevailing market forces tending forever to catch up with, to “compete down” temporarily dominating entrepreneurial initiatives provoking, by force of such process, entrepreneurial creativity yet anew in trying to tackle or outmanoeuvre the system “from within” and, as such, quite distinct from Marxian “dialectics”.*

²⁵ *Since, with Schumpeter, „perfect competition“ temporarily always having been „suspended whenever anything new is being induced ...“, thereby providing „the fundamental impulse that sets and keeps the capitalist engine in motion.“ (Schumpeter, 1942, 104f.)*

The entrepreneur in such a scenario takes on the role of unsettling “disequilibrators”, as an ever disturbing element to static or “circular flow” tendencies toward equilibrium in the very sense of “creative destruction”; as a movens of forever challenging the system “conditioned by given circumstances”,²⁶ of constantly trying to trick competitive market constraints and forces through innovative “new combinations” providing thus the intrinsic drive for (Schumpeterian) “economic development”.

Different from Marx, different also from the classical-neoclassical and as such essentially “static” concepts, Schumpeter in his “Theory” boldly presents an alternative (non-Marxian) interpretation of the “capitalist” process with the entrepreneur taking center stage. It is this very boldness too, which in good measure seems to account for the lasting relevance, if not to say fascination of his “Theory” up til now (shortly, by the way, to celebrate the 100 year anniversary since its first printing).

²⁶ Cf. heading of the very first chapter of the “Theory” (in German: “...Bedingtheit durch gegebene Verhaeltnisse”; Theorie, both 1912 and 1926).

Legacy and topical relevance in today's perspective

By provocatively casting the entrepreneur – traditionally being considered the “epitomy” of capitalism itself – as sort of villain or “antithesis” to the market system with its “mainstream” proclaimed tendencies toward (static) equilibrium, amply testifies to the originality of Schumpeter’s own theorizing. Thereby depicting the specific role of the entrepreneur under systems-related aspects further implies that the very same (“capitalist”) system essentially derives its inherent strength and dynamics from ever self-renewing entrepreneurial drive and initiatives; dynamics and strength, in the end, for sustained reproduction of the system as such out of its own forces, or “from within”.

Notwithstanding Schumpeter’s later skepticism under changed economic conditions in the face of World War II whether entrepreneurially led capitalism indeed may “survive”,²⁷ we today can witness a sheer global revival of Schumpeter’s early vision: be it in form of a new and growing awareness of the need for entrepreneurial initiatives, values and attitudes as crucial for sustainable development and more broadly based welfare; be it in recognizing the specific relevance of “entrepreneurship education”, or the importance of diversified entrepreneurially

²⁷ Cf. his famous „Capitalism, Socialism and Democracy” (1942) and numerous related references; it is in this his later work (not in his “Theory”) wherein Schumpeter explicitly coins the popular and much cited phrase of “creative distruction” (later on back-translated into German as “schoepferische Zerstoerung”).

based small and medium sized business structures; be it in the context of fostering business start-ups combined with venture capital financing and concomitant tendencies toward privatization worldwide (including related emphasis on economies “of scope” rather than just one-sidedly “of scale”)²⁸ – this all relates to the very notion of Schumpeterian “entrepreneurship” as being reflected in entrepreneurially driven initiatives, creativity and “leadership”. Leadership that in any market based system stands for structural diversification, for sustained viability and capabilities of success and sheer systemic “survival” under competitive conditions.²⁹

From a contemporary perspective, relevance and importance of Schumpeter’s vision nowadays seems to be demonstrated vividly in the ongoing - and partly still painful - restructuring from formerly centrally planned to market oriented systems in Central and Eastern Europe. A transformation whereby the final verdict over success or failure in large measure hinges on how effectively these economies are capable to build and rebuild their over decades ruthlessly weakened, if not outright ruined entrepreneurially based business structures as a prerequisite for economic dynamics and sustained development in an increasingly competitive environment with more and more diversified markets.³⁰

²⁸ Cf. Aiginger/Tichy (1984).

²⁹ Cf. Heertje, (1981); Heertje/Perlman (1993); Heilbroner (1993); Scherer (1992); Scherer/Perlman (1992).

³⁰ Cf. Becker/Knudsen (2002); Backhaus (2003); Giersch (1984, 1987); Scherer (1999); Shionoya/Perlman (1994).

More than ever, as it seems, can under today's regional as indeed world wide challenges Schumpeter's erstwhile vision serve as a valuable guide, as a kind of compass with a view to policy formulation for entrepreneurially conducive framework conditions, or more bluntly still: for creating conditions wherein entrepreneurial initiatives, creativity and leadership in the very Schumpeterian meaning can thrive and adequately are being rewarded. To conclude on that note in Schumpeter's own words: "Look around - and you will see, things really are like that."³¹ Or in conformity to his early motto again: "Hypotheses non fingo."³²

³¹ *Theorie 1934, „Vorwort“ (Preface) to 4th German printing (transl. J. H. P.).*

³² *See Annex 1; as kind of an invitation to scientifically „creative destruction“ Schumpeter, by the way, sums up the preface to the first edition wishing for himself „nothing more that this work as soon as possible be rendered obsolete and forgotten.“ (Transl. J.H.P.) – And this invitation, after now almost 100 years, apparently still holds.*

References

- Aiginger, K./G. Tichy: *Die Groesse der Kleinen. Die ueberraschenden Erfolge kleiner und mittlerer Unternehmungen in den achtziger Jahren*, Vienna (1984)
- Allen, R. L. *Opening Doors. The Life & Work of Joseph Schumpeter*, 2 vols., New Brunswick 1991
- Anderson, B. M.: *Schumpeter's Dynamic Economics*, *Political Science Quarterly*, Vol. 30 (1915), Dec.
- Backhaus, J. G. (ed.): *Joseph Alois Schumpeter. Entrepreneurship, Style and Vision*, Boston 2003
- Becker, M. C./T. Knudsen: *Schumpeter 1911. Farsighted Visions on Economic Development*, *American Journal of Economics and Sociology*, Vol. 61 (2002), April
- Boehm, S. (ed.): *Joseph A. Schumpeter. Beitrage zur Sozialoekonomik*, Vienna 1987
- Boehm-Bawerk, E. v.: *Positive Theorie des Kapitaes* (Innsbruck 1889), 4th printing, ed. by F. v. Wieser, Jena 1921 (= Vol. 2 of "Kapital und Kapitalzins")
- Bottomore, T.: *Between Marginalism and Marxism. The Economic Sociology of J. A. Schumpeter*, New York 1992
- Chandler, A. D. Jr.: *The Visible Hand. The Managerial Revolution in American Business*, Cambridge, Mass. 1977
- Id.: *Scale and Scope. The Dynamics of Industrial Capitalism*, Cambridge, Mass. 1990
- Clark, J. B.: *Theorie der wirtschaftlichen Entwicklung*, *American Economic Review*, Vol. 2 (1912), Nr. 4 (review)
- Clemence, R. V. (ed.): *Joseph A. Schumpeter. Essays on Entrepreneurs, Innovations, Business Cycles and the Evolution of Capitalism*, Cambridge, Mass. 1951
- Dopfer, K.: *The Phenomenon of Economic Change. Neoclassical vs. Schumpeterian Approaches*, in Magnusson (Boston-Dordrecht-London 1994)
- Ebner, A.: *The Institutional Analysis of Entrepreneurship. Historist Aspects of Schumpeter's Development Theory*, in Backhaus (Boston 2003)
- Elliott, J. E.: *Schumpeter and the Theory of Capitalist Economic Development*, *Journal of Economic Behavior and Organisation*, Vol. 4 (1983), Dec.
- Fagerberg, J.: *Schumpeter and the Revival of Evolutionary Economics. An Appraisal of the Literature*, *Journal of Evolutionary Economics*, Vol. 13 (2003), Nr. 2
- Giersch, H.: *The Age of Schumpeter*, *American Economic Review*, Vol. 74 (1984), May
- Id.: *Economic Policies in the Age of Schumpeter*, *European Economic Review*, Vol. 31 (1987), Feb./March
- Haberler, G.: *Schumpeter's Capitalism, Socialism and Democracy. After Fourty Years*, ed. by M. Okada, Kyoto 1981 (also in Heertje, New York 1981)
- Harris, S. E. (ed.): *Schumpeter. Social Scientist*, Cambridge, Mass. 1951
- Hedtke, U./R. Swedberg (eds.): *Joseph Alois Schumpeter. Briefe/Letters*, Tuebingen 2000
- Heertje, A. (ed.): *Schumpeter's Vision. Capitalism, Socialism and Democracy after 40 Years*, New York 1981
- Heertje, A./M. Perlman (eds.): *Evolving Technology and Market Structure. Studies in Schumpeterian Economics*, Ann Arbor (1990), 3rd printing 1993
- Heilbroner, R. L.: *Was Schumpeter Right ?*, *Social Research*, Vol. 48 (1981), Nr. 3
- Id.: *Was Schumpeter Right After All? Journal of Economic Perspectives*, Vol. 7 (1993), Summer

- Klausinger, H.: *Schumpeter und die Grosse Depression. Theorie-Diagnose-Politik, Diskussionsbeitraege, Institut fuer Volkswirtschaftslehre der Universitaet Hohenheim, Nr. 78, 1993*
- Kurz, H. D.: *Joseph A. Schumpeter. Ein Sozialoekonom zwischen Marx und Walras, Marburg 2005*
- Id.: *Schumpeter on Innovations and Profits. The Classical Heritage, Paper, Conference on "Neo-Schumpeterian Economics. An Agenda for the 21st Century", Trest 2006 (mimeo)*
- Langlois, R.: *Schumpeter and Personal Capitalism, in Eliasson, G./C. Green (eds.), Microfoundations of Economics Growth. A Schumpeterian Perspective, Ann Arbor 1998*
- Magnusson, L. (ed.): *Evolutionary and Neo-Schumpeterian Approaches to Economics, Boston-Dordrecht-London 1994*
- McCrae, R. C.: *Schumpeter's Economic System, Quarterly Journal of Economics, Vol. 27 (1913), Nr. 3*
- McCraw, T. K.: *Prophet of Innovation. Joseph Schumpeter and Creative Destruction, Cambridge, Mass.-London 2007*
- Mokyr, J.: *The Lever of Riches. Technological Creativity and Economic Progress, New York 1990*
- Mugler, J.: *Entrepreneurship and the Theory of the Firm, in Donckels, R./A. Miettinen (eds.), New Findings and Perspectives in Entrepreneurship, Aldershot 1990*
- Id.: *Strategic Development of SMEs in Turbulent Environments, in Piasecki, B. (ed.), Entrepreneurship and Small Business Development in the 21st Century, Lodz 2002*
- Nelson, R./S.G. Winter: *An Evolutionary Theory of the Firm, Cambridge, Mass. 1982*
- Nicholas, T.: *Why Schumpeter was Right. Innovation, Market Power, and Creative Destruction in 1920s America, Journal of Economic History, Vol. 63 (2003), Dec.*
- Perelman, M.: *Retrospectives. Schumpeter, David Wells and Creative Destruction, Journal of Economic Perspectives, Vol. 9 (1995), Nr. 3*
- Roepke, J.: *Der lernende Unternehmer. Zur Konstruktion und Evolution unternehmerischen Bewusstseins, Marburg 2002*
- Roepke, J./O. Stiller (eds.): *Joseph Schumpeter. Theorie der wirtschaftlichen Entwicklung. Nachdruck der 1. Auflage von 1912, ergaenzet um eine Einfuehrung, Berlin 2006*
- Romer, P. M.: *Endogenous Technological Change, Journal of Political Economy, Vol. 98 (1990), Nr. 5*
- Scherer, F. M.: *Innovation and Growth. Schumpeterian Perspectives, Cambridge, Mass. 1984*
- Id.: *Schumpeter and Plausible Capitalism, Journal of Economic Literature, Vol. XXX (1992), Sept.*
- Id.: *New Perspectives on Economic Growth and Technological Innovation, Washington D.C. 1999*
- Scherer, F. M./M. Perlman (eds.): *Entrepreneurship, Technological Innovation and Economic Growth. Studies in the Schumpeterian Tradition, Ann Arbor 1992*
- Schmidt, K.-H.: *Vorlaeufer und Anfaenge von Schumpeters Theorien der wirtschaftlichen Entwicklung. Arbeitspapiere des Fachbereichs Wirtschaftswissenschaft, Neue Folge Nr. 8, University Paderborn 1987*
- Schumpeter, J. A.: *Das Wesen und der Hauptinhalt der theoretischen Nationaloekonomie, Leipzig 1908*
- Id.: *Theorie der wirtschaftlichen Entwicklung, Leipzig 1912*
- Id.: *The Theory of Economic Development. An Inquiry into Profits, Capital, Credit, Interest and the Business Cycle. Translated by R. Opie, Cambridge, Mass. 1934*
- Id.: *Capitalism, Socialism and Democracy (New York 1942), 5th ed., Introduction by T. Bottmore, London 1976*
- Id.: *"Capitalism", Encyclopedia Britannica, London 1946*
- Id.: *Science and Ideology, American Economic Review, Vol. 39 (1949), March (=Presidential Address, Dec. 1948)*

- Id.*: *The Communist Manifesto in Sociology and Economics*, *Journal of Political Economy*, Vol. 57 (1949), June; reprinted in *Clemence* (Cambridge, Mass. 1991)
- Id.*: *Economic Theory and Entrepreneurial History* (1948), in *Center for Research in Entrepreneurial History: Change and Entrepreneur. Postulates and Patterns in Entrepreneurial History*, Cambridge, Mass. 1949
- Id.*: *Comments on a Plan for the Study of Entrepreneurship*, reprinted in *Swedberg* (Princeton 1991)
- Seidl, C. (ed.): *Lectures on Schumpeterian Economics*, Berlin etc. 1984
- Shionoya, Y./M. Perlman (eds.): *Innovation in Technology, Industries and Institutions. Studies in Schumpeterian Perspectives*, Ann Arbor 1994
- Stolper, W. F.: *The Theoretical Bases of Economic Policy. The Schumpeterian Perspective*, *Journal of Evolutionary Economics*, Vol. 1 (1991), Nr. 3
- Id.*: *Joseph Alois Schumpeter. The Public Life of a Private Man*, Princeton 1994
- Stolper, W.F./C. Seidl (eds.): *Joseph A. Schumpeter. Aufsätze zur Wirtschaftspolitik*, Tuebingen 1985
- Streissler, E. W.: *The Influence of German and Austrian Economics on Joseph A. Schumpeter. Paper, Conference of the International Joseph A. Schumpeter Society, Kyoto 1992 (mimeo)*
- Swedberg, R.: *Joseph A. Schumpeter. His Life and Work*, Oxford 1991
- Id.*: *Joseph A. Schumpeter. The Economics and Sociology of Capitalism*, Princeton 1991
- Id.*: *Schumpeter's Early Work*, *Journal of Evolutionary Economics*, Vol. 2 (1992), Nr. 1
- Vecci, N. de: *Entrepreneurs, Institutions and Economic Change. The Economic Thought of J. A. Schumpeter (1905-1925)*. Translated by A. Stone, Aldershot 1995
- Wicksell, K.: *Ueber Wert, Kapital und Rente nach den neueren nationaloekonomischen Theorien*, Jena 1893; reprinted in *London School of Economics Series Nr. 15*, London 1933
- Id.*: *Zur Lehre von der Steuerinzidenz*, Diss., Uppsala 1895; transl. as "Income Taxes and Duties", in Sandelin, B. (ed.): *Knut Wicksell. Selected essays in economics*, Vol. I., London-New York 1997 (esp. Part II, Appendix to Eugen v. Boehm-Bawerk)
- Winter, S. G.: *Schumpeterian Competition in Alternative Technological Regimes*, *Journal of Economic Behaviour and Organisation*, Vol. 5 (1984), Nr. 3-4

Theorie der wirtschaftlichen Entwicklung

Von

Dr. Joseph Schumpeter.

Hypotheses non fingo.



Leipzig,
Verlag von Duncker & Humblot.
1912.

***THE THEORY OF
ECONOMIC DEVELOPMENT***

*An Inquiry into Profits, Capital, Credit, Interest,
and the Business Cycle*

JOSEPH A. SCHUMPETER

TRANSLATED BY
REDVERS OPIE

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BY THE PRESIDENT AND FELLOWS OF HARVARD COLLEGE*

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HARVARD ECONOMIC STUDIES SERIES, 1934*

SCHUMPETER's FAMOUS „FIVE CASES“

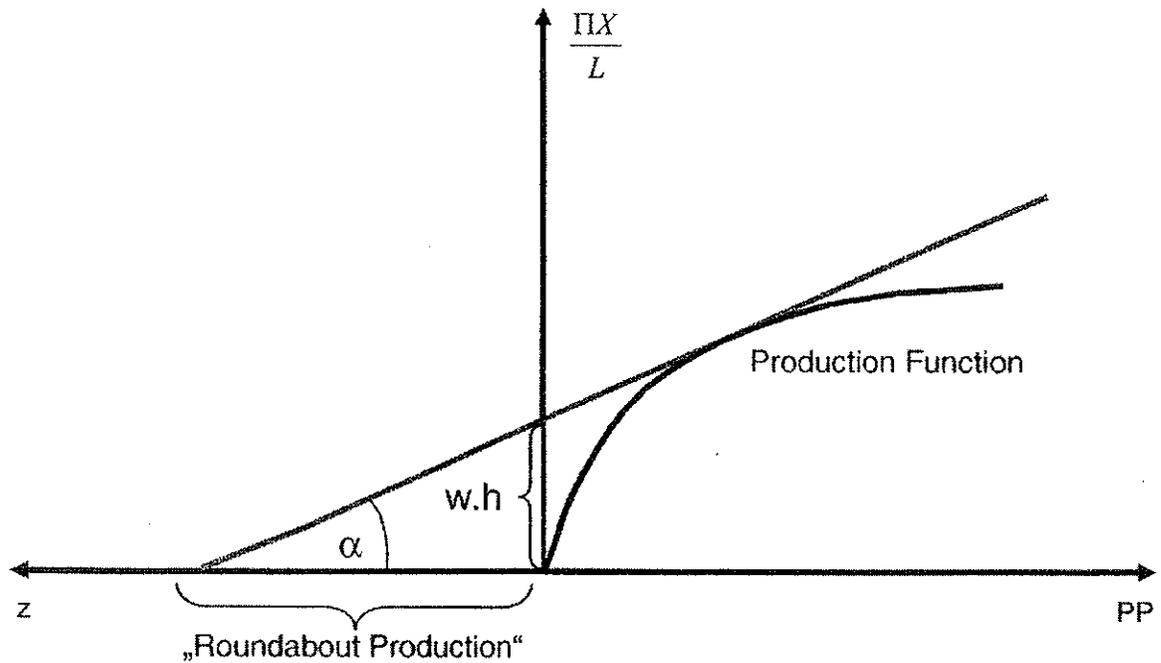
characterising entrepreneurially driven development
„by the carrying out of new combinations“:

(1) The introduction of a new good – that is one with which consumers are not yet familiar – or of a new quality of a good. (2) The introduction of a new method of production, that is one not yet tested by experience in the branch of manufacture concerned, which need by no means be founded upon a discovery scientifically new, and can also exist in a new way of handling a commodity commercially. (3) The opening of a new market, that is a market into which the particular branch of manufacture of the country in question has not previously entered, whether or not this market has existed before. (4) The conquest of a new source of supply of raw materials or half-manufactured goods, again irrespective of whether this source already exists or whether it has first to be created. (5) The carrying out of the new organisation of any industry, like the creation of a monopoly position (for example through trustification) or the breaking up of a monopoly position.

(„Theory“ 1934, p. 66)

Boehm-Bawerk's „Roundabout Production“*

<in WICKSELL's re-interpretation> **



$\frac{\pi X}{L}$ Output : Employment (= Labour Productivity)

PP \emptyset Production Period

z „Roundabout Production“ $\left(= \frac{2}{i} \right)$

*) „Positive Theorie des Kapitals“ (1889)

**) Cf. Wicksell, K. (1893; graph, p. 97)

Toward a Comprehensive Model of Global Entrepreneurship

by Ji-Hee Kim, Alan G. Weinstein, Sara E. Shirley, and Imad Melhern

The authors have put forth a Comprehensive Model of Global Entrepreneurship and described the factors that comprise this model. These factors include access to capital, governmental support systems, political and economic systems, private sector support systems, entrepreneurial education, trade associations, internal and external environment; infrastructure, and socio-cultural environment. Most attention is given to access to capital because it is so important to financial needs to start-ups and growing entrepreneurial ventures. The level of these influential factors varies across nations. The authors conclude a macro approach in a complex global economy is the best way to understand global entrepreneurship.

Introduction

Entrepreneurship and small business fuel economic growth. Timmons and Spinelli discuss job creation and quote the research of David L Birch. Birch discovered that 81.5 percent of the net new jobs formed from 1961 to 1976 were a result of new entrepreneurial and growing small firm efforts. Entrepreneurship has also dramatically impacted employment patterns. For example, in 1960, 25 percent of the workforce worked for a Fortune 500 company. In 1980 that number dropped to about 20 percent of workers, and by 2006, the percentage had dropped to less than 9 percent (Timmons and Spinelli, 2009).

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Trends such as this are important because they demonstrate that growing entrepreneurial companies are adding jobs while well established Fortune 500 companies are reducing them. This supports the claim that entrepreneurs and small businesses are having an increasing impact on economic growth.

Research on entrepreneurship has increased dramatically in recent years. Most of this research has focused on two areas; the individual attributes of the entrepreneur and technical breakthroughs. These have long been considered the primary stimuli to successful entrepreneurial ventures. Some personal entrepreneurial attributes that have been supported by research are propensity toward moderate risk, tolerance for ambiguity, and need for achievement. These are considered drivers of entrepreneurship.

To illustrate this point, many successful entrepreneurial companies did not exist 20 years ago. These companies were led by individuals who had “the right stuff” and were able to use their personal attributes to pioneer new technologies and innovations such as personal computers and internet selling. Combining the entrepreneurial spirit and technology, entrepreneurs like Bill Gates, Jeff Bezos, and Stephen Jobs were able to grow companies, add jobs and create wealth. The question remains, are these factors sufficient to create successful ventures? Are there other variable that determine success?

Entrepreneurship research has largely ignored macro-level variables that may influence entrepreneurial activity. An example of this has been cited by Hernando De Soto, who asserts that entrepreneurial growth in America is directly related to the American legal system. He believes that the legal system allows Americans to leverage their assets and thus have access to a primary source of capital for their entrepreneurial ventures (De Soto, 2000). For example, real estate property in the United States has value because it has a deed that offers proof of ownership. This deed is recorded in a way which gives the owner legal title to the property. The equity in this property is often used to raise the capital needed to support an entrepreneurial venture, either through a mortgage or a securitized loan. Without legal title, this capital cannot be accessed.

The authors argue that more attention should be given to research that focuses on macro-level factors. This will help to gain a better understanding of the entrepreneurial process. In support of this argument, there has been both commentary and research conducted. It should not be assumed that research findings in one country directly translated to another country. In this paper, the authors will focus on the factors that affect entrepreneurial activity using a cross cultural and macro level approach.

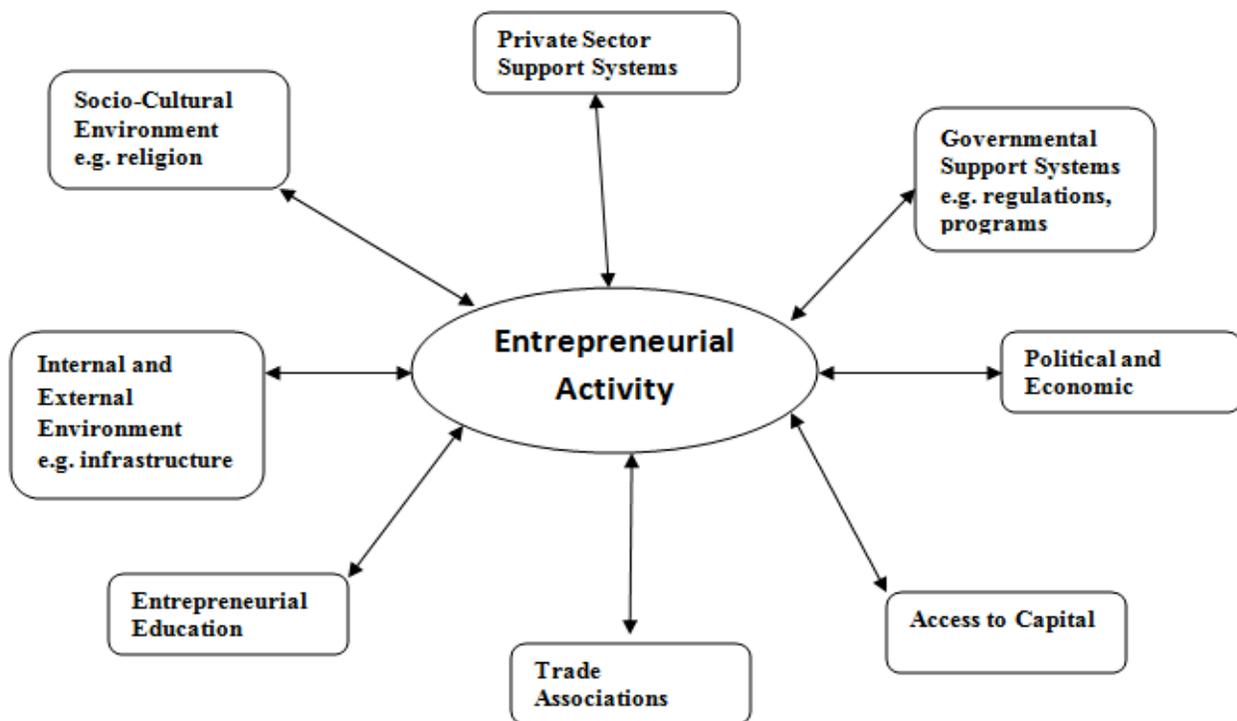
The Global Entrepreneurship Monitor (GEM) research was designed to conduct an annual assessment of the national level of entrepreneurial activity (2008). While this research is useful, the GEM research only covers a small segment of entrepreneurs’ current role in the increasingly global economy. The GEM project documents and compares entrepreneurial activities across countries. This is important research. Yet, it does not explain why one country flourishes and another is dormant. It does not explain why one country struggles to grow companies beyond a few employees while another continues to grow its entrepreneurial companies to employ many. Current research, including GEM, is not able to answer these questions.

We are proposing that while national and even individual entrepreneurship characteristics are important, a global study of entrepreneurship activity should begin at the macro level. In addition to these factors, current research, such as the GEM global reports, focuses on a quantitative analysis of entrepreneurial activities around the world. This has resulted in less

attention being given to qualitative data and analysis. Taking qualitative data and analyzing it further is essential to discovering the underlying explanations that contribute to the variations in entrepreneurial activity across countries. Thus, we have focused our research on macro variables which will help to clarify the importance of various qualitative entrepreneurial factors.

Based on our review of entrepreneurial research, we have created a model which we believe explains global entrepreneurial activity. This model describes variables that can be applied to entrepreneurship both across and within nations. The authors believe that this approach may explain much of the GEM data and answer questions of why some countries are entrepreneurially rich while others are weak. A multi-variable approach has been applied to fully examine factors that affect all nations.

Figure 1
Comprehensive Model of Factors Leading to Entrepreneurial Activity



Explanatory Factors

We will now briefly describe each characteristic in our model, the sub-factors that lie within it, and the effect that it has on entrepreneurial success. Most of our attention will be devoted to access to capital. The authors believe this one factor is responsible for much of the variance between national entrepreneurial activity levels. Other variables will be described in

less detail. There are numerous sub-factors that lie within each of our variables. Examples will be offered to illustrate these factors.

Access to Capital

Whether at the start-up or any growth stage, identifying sources of potential capital is one of the major issues that entrepreneurs all over the world must face as they start their businesses. Without this capital, an entrepreneur is lacking essential resources necessary for success. A study completed by the *Corporation for Enterprise Development*, published in 2001, was reported by Kreft (2003). The study lists eight core elements of an infrastructure necessary for supporting entrepreneurship. Of these eight core elements, six related to an entrepreneur's ability to access capital. One could conclude from this study, that access to capital plays a pivotal role in entrepreneurial success.

The authors were surprised, given the importance of access to capital, that the published research on this topic has been limited. Of the research reported, the findings have been consistent in supporting the need for capital throughout the global economy. One study of young potential entrepreneurs attempting to start a business in the UK found that access to capital was the number one barrier to entry (Patel, 2005). Another study sponsored by the World Bank noted that a major problem facing SMEs in Latin America was the constraint on their ability to access capital.

Research relating to access to capital and entrepreneurs consistently supports the importance of capital. However, little is known about the specific sources of capital available to entrepreneurs. There are numerous sources of capital through which entrepreneurs can gain access. These sources and their availability to entrepreneurs are discussed below.

Personal Funds, Family, and Friends: An entrepreneur's personal funds serve as the primary source of financing start-ups throughout the world. A study conducted with nations participating in the GEM project found that 62 percent of the entrepreneurial start-up funds were provided through self-funding (GEM, 2006). Research on start-ups in China found the greatest source of capital coming from personal savings, family and close and friends. Chinese entrepreneurs seldom rely on bank loans for their start-up capital (Hussain, Millman, and Matlay, 2006).

Microfinance and Microcredit: Microfinance and Microcredit have recently become a major source of funding for entrepreneurs across the globe. Microfinance is typically small scale loans (usually less than EURO 25,000) to entrepreneurs for start-ups and growth (Irwin, 2006). Often, though not always, it is provided by not-for-profit loan funds that have raised capital from charitable and public sources. It is noteworthy that the Nobel Peace Prize in 2006 was awarded to Dr. Muhammad Yunus for his work in providing micro loans to hundreds of small businesses.

An impressive example of the success that microfinance can have on entrepreneurship was highlighted in a GEM study (GEM, 2007). In this study, an entrepreneur, Oscar Javier Rivera Jimenez, hoped to start a business by delivering parts in the Chimalhuacan district, one of the poorer slums outside of Mexico City. Oscar was able to expand from a single man delivering parts on his bike, to a well stocked warehouse with nine employees, because of a micro finance loan he received from Compartamos, Latin America's biggest provider of microfinance. The presence of organizations such as Compartamos can greatly increase an entrepreneur's ability to grow a business.

Grants: Grants are another potential form of capital for an entrepreneur. Grants are usually in the form of funding awards given to a company or an educational institution to support

promising business or technological opportunities. In the United States the Small Business Association offers grants under its Small Business Innovation Research (*SBIR*) for companies developing new technologies with high potential for commercial success. These types of grants can be a major source of finance for entrepreneurs.

Angel Investors: Angels are typically high net worth individuals who invest in new and early stage businesses. Angels invest in companies that cannot attract mainstream venture capital” (Irwin, 2006). In 2007, research conducted at the University of New Hampshire found that 258,200 angels pumped 26 billion dollars into 57,120 companies in the United States (Wehrum, 2009). This is one of the largest sources of start-up capital for US entrepreneurs.

Asset Finance: Asset financing allows an entrepreneur to borrow from a financial institution based on some percentage of assets owned by the company. These assets are typically inventory and receivables, although real estate and other assets may be used. The asset serves as the security required to obtain borrowed funds. Asset financing benefits the entrepreneur by providing working capital which allows the company to operate while it awaits payment for its products and services. This is helpful for entrepreneurs who have recognizable assets; however, according to De Soto a great deal of the developing world’s capital is considered “dead” (De Soto, 2000). In his book, *The Mystery of Capital*, De Soto asserts that “capital, like energy, is also a dormant value. Bringing it to life requires us to go beyond looking at our assets as they are, to actively thinking about them as they could be” (De Soto, 2000, p.45). Therefore, countries that fail to recognize millions of dollars of assets, take away the potential to raise important capital. As an example, one of the richest sources of working capital comes from real estate. In many countries, real estate is not valued as an asset, and therefore, not available as security for borrowing funds.

Seed Funds: Seed funds provide support to help launch businesses in their early development. These are risky investments because they are made early in the life of a business when it is most at risk. Seed financing is particularly important in high tech ventures which take several years to realize marketable products. Most entrepreneurial ventures are not candidates for seed capital. Yet for some companies, seed funds are an important source of financing. A study reported by the Norwegian Institute for Urban and Regional Research found that only 17 percent of entrepreneurial financing was in the form of seed funds (Langeland, 2007).

Venture Capital: Venture capital funds are available for only a small percentage of start-up and high growth companies. Fewer than 1 in 10,000 start-ups attract venture capital. A GEM research study found informal investors contribute 3.5% into the GDP of GEM nations while venture capital contributes only .1(Minniti, Bygrave, Autio, 2006). A later GEM study found that 71 percent of the amount of venture capital in the G7 nations was invested in United States companies (Bosma and Harding, 2007).

SMEs in developing countries find it difficult to obtain venture capital fund compared to industrialized countries. A study by Hussain (2006) concluded that China’s lack of venture backed SMEs put the country at a disadvantage when compared to economically developed countries like the UK. To remain competitive in international markets, developing countries could greatly benefit from venture capital.

Re-invested Capital: Internal funds can provide a major source of finance for entrepreneurs. Re-invested capital originates from the firm’s profits that are then re-invested the business. Studies have found that the percentage of an entrepreneur’s reinvestment in their businesses is higher in the early stages of their business growth with the average rate of reinvestment decreasing once the business and profits become more consistent and stable (Brown, Earle, and Lup, 2005).

Guaranteed Loan Programs: Loan-guarantees are established by governmental agencies to help entrepreneurs qualify for loans from financial institutions. When entrepreneurs have a reasonable chance to succeed, but they lack the adequate collateral to convince a lender to loan them money, government loan guarantee programs can help. For example, in the United Kingdom, from April 2004 to March 2005, the Small Firms Loan Guarantee Scheme guaranteed 7,130 loans with a cumulative value of GBP 481 million (Irwin, 2006). This form of governmental guarantee allows entrepreneurs access to capital that otherwise would be denied by financial institutions.

IPOs: Most companies never go public. However, for those that have created value, an Initial Public Offering of its stock is an important source of financing for future growth. This adds a great deal of liquidity to the financial structure of the business, allowing entrepreneurs to raise capital by selling equity rather than using debt. It also allows entrepreneurs a chance to take some of their investment out of the company. IPOs are rare. In the United States in 2005, 45 venture backed companies raised \$3.4 billion with IPOs. In comparison, approximately 3 million new companies raised \$100 billion of other investments, and the founding entrepreneurs themselves contributed another \$200 billion (Bosma and Harding, 2007).

Credit Cards: Many early stage entrepreneurs raise financing through the use of credit cards when they fail to qualify for traditional loans. This type of credit is generally not secured, which is why it is often attractive to entrepreneurs. Credit card debt is risky and often carries high interest rates. The rates charged on credit cards can add a financial burden to the company when repaying the debt.

Governmental Support Systems

The governmental support systems have a major impact on entrepreneurial activity. Irwin (2006) concluded that government policies are crucial in creating an environment that enables entrepreneurial business to flourish. He also makes a case that it is essential for governments to do everything possible to improve the environment for business; not just in terms of simpler and more transparent regulation, but including tax policies, labor laws, understandable and fair property rights and the ability to enforce contracts. These governmental roles can have a dramatic effect on entrepreneurial activity. Depending on the governmental support systems in place, a potential entrepreneur may be more or less likely to start a business in the market.

A government's role in supporting entrepreneurial activities can be looked at from two different views. The first role of government is the regulatory environment it creates. The second role is in developing programs to help increase the level of entrepreneurial activities nationally and internationally. These are described in more detail below

Entry Regulation: The entry regulations that various governments have established vary in severity. For example, in order for an entrepreneur in Mozambique to meet government requirements for starting a business, he must complete 19 procedures taking at least 149 business days and pay US\$256 in fees. In contrast, an entrepreneur in Canada wishing to start a business could complete the required process of 2 procedures in 2 days while paying US\$280 in fees (Djankov, La Porta, De Selanes, and Shleifer, 2002). Even if the entrepreneurial spirit is present in the population, barriers to entry may inhibit business start-ups.

Regulatory Environment and Policies: Regulatory policies also have a considerable impact on the level of entrepreneurial activity. For example, in the United States small businesses are often burdened by regulatory factors such as the EPA, OSHA and EEO. The necessity to learn and implement programs that deal with regulation can be difficult and costly; a factor which

in turn could decrease a country's level of entrepreneurial activity.

Taxes: Taxes, specifically the various business taxes, can be a complicate governmental burden for entrepreneurs. These complications create difficulties in understanding taxes. This in turn creates expenses to cope with tax laws. Many entrepreneurs hire tax specialists to deal with the myriad of tax codes. For example, taxes vary in the US depending upon the legal form of the business. They also vary depending upon the type of expenses that the company makes. Furthermore, taxes can vary depending upon the physical location of the company. Governmental tax policies can also cut directly into an entrepreneur's profitability. For example, taxes such inheritance or death taxes, can severely impact the capitalization of a company (Kreft, 2003). Specifically, these taxes directly reduce the ability of entrepreneurs to pass on their entrepreneurial gains to fund future generations of entrepreneurs.

Tariffs: The establishment of tariffs is another governmental factor that can impact entrepreneurial activity. From a domestic standpoint, entrepreneurs would support the establishment of tariffs against foreign products because it would protect their domestic market. However, domestic tariffs for entrepreneurs can cause problems if the entrepreneur needs to import supplies from another country. If the government has strict tariffs in place, an entrepreneur may have no choice but to get their supplies domestically and face an increase in costs. In addition to these factors, if entrepreneurs hope to expand their business abroad, they may be at a disadvantage because of foreign tariff policies. Their products would be more expensive when competing globally, thus decreasing their ability to expand.

Government Support Programs: In addition to regulatory and legal inputs, governments also play a crucial role in developing programs to help increase the level of entrepreneurial activity. These programs range in both size and mission. For example, the United States has established the Small Business Administration (SBA), a relatively large program to help SMEs, while Canada created the Youth Entrepreneurs Association to aid their younger entrepreneurs. An article in the Journal of Business Venturing found that, the IFF (Innovation Investment Funds, Australia) program has facilitated investments in start-up, early stage and high-tech firms (Cummings, 2007). The presence of these forms of governmental support can greatly increase entrepreneurial activity.

International Trade Agreements: International trade agreements can influence the competitiveness of entrepreneurs. In an increasingly global economy, international economic institutions, such as the World Bank and the World Trade Organization, are strengthening their influence on entrepreneurship and entrepreneurial opportunities. This is usually achieved through international trade agreements and liberalizing trade and investment policies across countries. The money and level of influence these organizations have can directly impact national or regional entrepreneurship.

Political and Economic Systems

Political and economic systems are an integral part of business. The political system and specific economic situation can vary dramatically from one nation to another. Even though these systems can have numerous differences depending on the country in which the entrepreneur is located, there are some general factors that affect entrepreneurial activity. For example, an entrepreneur starting a business in a democratic system as opposed to a communist system can face dramatically different challenges. For years China's communist political background had a direct impact on the business and entrepreneurial environment. The communist system was committed to fight and suppress capitalism, private property. This form of political suppression can diminish an entrepreneur's ability to enter the marketplace.

Politics and political parties have a great influence on entrepreneurial trends and resources in a nation. In some developing countries, it is almost impossible to start and grow a business without having decent political power, which is usually obtained by standing under the umbrella of a strong political party. As with governmental corruption, an entrepreneur's need to establish political support before becoming competitive in the nation can be a major detriment to entrepreneurial activity.

Entrepreneurs can also have an impact on politics. In the US, research by Kuratko (2006) found that the political influence of entrepreneurs has been growing over the past 25 years. An entrepreneur's ability to influence politics and legislation can be a factor that can greatly work to their advantage. Therefore, a nation which has a political system where entrepreneurs can have influence would be more likely to have higher levels of entrepreneurs and small businesses.

The various characteristics of a nation's economic systems can also have a direct impact on entrepreneurial activity. Hitt and Hoskisson found several economic factors that affect entrepreneurship: "inflation rates, interest rates, trade deficits or surpluses, budget deficits or surpluses, labor training laws, and educational philosophies and policies" (Kuratko, 2006). Specifically, a country's inflation rate can have a profound impact on the attractiveness of entrepreneurship. According to GEM studies, data shows that early stage entrepreneurial activities tend to be high in countries with lower per capita GDP; however, it declines sharply in the middle-income countries, rising again in high-income countries. These trends demonstrate how a nation's economic system can have a dramatic effect on entrepreneurial activity.

The overall state of the economy can be an additional factor that can impact the level of entrepreneurial activity. The interviews conducted by Cheung and Chow, found that entrepreneurs in Hong Kong felt that a good economic environment made it easier to start a business (Cheung, 2006). Therefore, a country that is perceived as having a better overall economy may also find a higher degree of entrepreneurial activity.

Private Sector Support Systems

Networking opportunities and access to information have long been considered important to successful entrepreneurship. Good networking can break down many of the obstacles that an entrepreneur may face. Networking can also give entrepreneurs easier access to key information necessary for their success. Given the benefits that networking can have, the private sector has created support systems for entrepreneurs. In the United States, TIP clubs have emerged where business owners get together to discuss how they can help each other grow their businesses. Organizations like Young Presidents Organization (YPO) and Vistage International (formerly TEC) offer peer group support for business owners. One organization, Vistage International, studied their members and found increases in profits compared to national averages (Vistage, 2006).

Entrepreneurial Education

Educational systems have played an important role in entrepreneurship. Recent research has found that "entrepreneurship has spawned a new education paradigm for learning and teaching" (Timmons and Spinelli, 2009). Private and public schools at all educational levels have launched entrepreneurship studies and programs. It is too early to assess these results; however, they represent the labs where the entrepreneurship is both legitimized and stimulated.

Trade Associations

Trade associations develop industries by promoting activities such as advertising, education, political donations, and lobbying. The influence that these parties have in their respective industries can be a useful aid for entrepreneurs looking to gain support in their market.

In some countries, entrepreneurs are required to interact with trade associations or trade groups. Specifically, many developing nations require approval from the trade group in their respective industry before entrepreneurial companies are able to enter the market.

Internal and External Environment; Infrastructure

Security: A fundamental condition for business to thrive is security. Crime and civil unrest are enemies of entrepreneurs. It is obvious that countries with lower levels of security experience higher risks, which results in lower levels of entrepreneurship. The level of security hurts both the potential entrepreneur and investors who shy away from regions with high potential for civil unrest.

Physical Infrastructure (Transportation, Utilities, and Communications Technology): Malfunction in key systems such as transportation or utility services can severely harm businesses. This is particularly true for the more vulnerable start-up and early stage business. Reliable transportation, sources of energy and physical infrastructure are essential for entrepreneurship to thrive.

Climate (Natural Disasters): Many firms suffer the consequences of natural disasters. Hurricanes, tsunamis and many other natural disasters have either ruined businesses or kept entrepreneurs from investing in those areas. In the US, the SBA has created an incentive package to encourage small businesses to open in areas that were most affected by Hurricane Katrina. The Gulf Coast Business Matchmaking Fund provides access to federal, state and local governmental help to qualified businesses. These programs are created help entrepreneurs to invest in distressed areas.

Socio-Cultural Environment

Several socio-cultural factors have been addressed in recent research. For example, a study focusing on the success factors of young Chinese noted several socio-cultural factors such as “placing a high value on innovation, risk taking, and independence” (Cheung, 2006). These factors, among others, can have a dramatic affect on an entrepreneur’s drive and ability to successfully start a business. For our model specifically, we will focus on one socio-cultural factor that can be applied to entrepreneurs; religion.

Most religious beliefs and practices have an impact on the way of conducting business and trade. This can affect the entrepreneur’s behavior differently according to the rules applied to followers of each religion. According to Kwon (1997) “the individual elements making up an entrepreneur's belief matrix influence the entrepreneurial process. Where religious salience is high, entrepreneurs will tend to use religious criteria to influence their decision making, even if it harms their short-term commercial interests” (p.151). Cheng (1958) in referring to the work of Max Weber concluded that religion was an important link to the business success. Weber believed that the protestant ethic was a powerful force in fostering the accumulation of wealth. This had a great influence on the entrepreneurs of the time.

Religious groups can also provide a resource for creating entrepreneurial capital (Kwon, 1997).

The whole concept of Islamic banking was developed to get over some obstacles that entrepreneurs were facing as a result of conflict between Islamic trade rules and the global

banking system. An important difference between Islamic commerce and conventional commercial transactions is the Islamic prohibition on paying or receiving interest. But there are also other significant divergences which need to be taken into account. An Islamic belief is that property is God-given. Clearly, the construction of property in the Islamic religion differs from that of property as a secular value. For Muslims, loans cannot be made or accepted in accordance with traditional banking methods. This is because traditional banking requires the payment of interest. To get around this, Islamic banking allows a prospective client to borrow money while still adhering to Islamic Law through a profit and loss sharing with the borrower. This sharing is a form of partnership where lenders risk their investment with borrowers on the basis of their capital share and effort. Unlike interest based financing there is no guaranteed rate of return (Venardos 2005). To contrast traditional and Islamic banking further, the rationale of Islamic banking is to foster partnership and support businesses in both good and difficult times. There is no interest allowed so there is no payment burden on the borrower. Traditional banking requires the borrower is to pay a pre-determined rate of interest on the sum borrowed even if the borrower incurs losses. To insist on interest payments irrespective of the economic circumstances of the borrower, violates the Islamic rule of justice.

Furthermore, Vernardos (2005) claims that an interest-based system discourages innovation, particularly on the part of small-scale enterprises. Large industrial firms and big landholders can afford to experiment with new techniques of production because they have reserves to fall back upon. It is interesting to speculate how companies using traditional banking methods compare to companies using Islamic banking rules in a recession, where sales and profits are reduced.

Kwon (1997) studied Korean immigrants who show high rates of entrepreneurship and church attendance. The perceived connection is that ethnic churches provide entrepreneurs a pool of potential customers and employees while immigrants (especially new arrivals) benefit from church attendance as a means of finding work.

To summarize religion as a factor affecting entrepreneurship activity is worthy of study. There is much speculation that religion has an influence and relatively little empirical research supporting its importance.

Conclusion

The authors have put forth a Global Model of Entrepreneurship and described the factors that comprise the model. Much research is needed to test these factors. It is hoped that this research can help nations remove obstacles to entrepreneurship while creating opportunities for new venture creation. It is naïve to think that entrepreneurs can withstand economic, political and socio-cultural factors even if they have a strong entrepreneurial spirit. In a global world, a macro approach to the study of entrepreneurship is long overdue.

References

Bosma, N. and Harding, R., and Global Entrepreneurship Research Consortium (2007).

Global Entrepreneurship Monitor 2006 Summary Results.

Bosma, N., Jones, K., Autio, E., Levie, J., and Global Entrepreneurship Research Consortium (2008).

Global Entrepreneurship Monitor 2007 Executive Report.

< http://www.gemconsortium.org/download/1241379721953/GEM_2007_Executive_Report.pdf>.

- Bosma, N., Acs, Z. J., Autio, E., Coduras, A., Levie, J., and Global Entrepreneurship Research Consortium (2009). *Global Entrepreneurship Monitor 2008 Executive Report*.
<http://www.gemconsortium.org/download/1241375817468/GEM_Global_08.pdf>.
- Brown, J.D., Earle, J.S., and Lup, D. (2005). "What Makes Small Firms Grow? Finance, Human Capital, Technical Assistance, and the Business Environment in Romania," *Economic Development and Cultural Change*, 54(October).
- Bruce, D. and Mohsin, M. (2006). "Tax Policy and Entrepreneurship: New Time Series Evidence," *Small Business Economics*, 26.
- Cumming, D. (2007). "Government Policy Towards Entrepreneurial Finance: Innovation Investment Funds", *Journal of Business Venturing*, 22 (2), 193-235.
- De Soto, H.(2000). *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*. New York, NY: Basic Books
- De La Torre, A., Peria, M. S. M., Schmukler, S. (2008). *Bank Involvement with SMEs: Beyond Relationship Lending*. Washington, DC.: The World Bank Development Economics Research Group and Latin America and the Caribbean Region
- Dickson, P. H., Solomon, G. T., and Weaver, K.M. (2008). "Entrepreneurial Selection and Success: Does Education Matter?" *Journal of Small Business and Enterprise Development*, 15(2), 239.
- Djankov, S., La Porta, R., De-Silanes, F., and Shleifer, A. (2002). "The Regulation of Entry," *Quarterly Journal of Economics*, 117 (1), 1-37.
- Hussain, J., Millman, C., and Matlay, H. (2006). "SME Financing in the UK and in China: A Comparative Perspective," *Journal of Small Business and Enterprise Development*, 13(4). 584-591.
- Irwin, D. (2006). "Financing Entrepreneurship at the Regional and Local Level in South East Europe", in *OECD Papers*. 6(12), 14-42.
- Kuratko, D. F. (2006), "A Tribute to 50 Years of Excellence in Entrepreneurship and Small Business," *Journal of Small Business Management*, 44(3), 483-492.
- Kwon, V. H. (1997). *Entrepreneurship and Religion: Korean Immigrants in Houston, Texas*. New York, NY: Garland Publishing.
- Langeland, O. (2007). "Financing Innovation: The Role of Norwegian Venture Capitalists in Financing Knowledge-intensive Enterprises", *European Planning Studies*, 15(9), 1143-1161
- Minniti, M., Bygrave, W., and Autio, E., and Global Entrepreneurship Research Consortium (2006). *Global Entrepreneurship Monitor 2005 Executive Report*.
<http://www.gemconsortium.org/about.aspx?page=global_reports_2005>
- Small Business Administration. <<http://www.sba.gov>>
- Timmoms, J. A., and S. Spinelli (2009). *New Venture Creation: Entrepreneurship for the 21st Century*.

- 7th Ed., New York, NY: McGraw-Hill/Irwin.
- Venardos, A. M. (2005). *Islamic Banking and Finance in South East Asia: Its Development and Future*,
Tuck Link, Singapore: World Scientific Publishing Co. Pte. Ltd.
- Vistage International (2006). <<http://www.vistage.com>>
- Wehrum, K. (2009). "Angel Investing 2009," Special Financial Report in INC. Magazine, January 2009,
<<http://www.inc.com/magazine/20090101/angel-investing-2009.html>>.
- Wren, C. (1999). "Marginal and Average Tax Rates and the Incentive for Self-Employment,"
Southern
Economic Journal, 1999 April.

Do Socio-economic Indicators Really Matters for Entrepreneurship? A Latin-American perspective

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This work studies the relationship between entrepreneurial activity and a set of factors such as GDP, the level and composition of unemployment, the impact of the informal economy, the perception of corruption, the macroeconomic stability and labor regulations. We use a panel data from ten Latin-American countries covered by Global Entrepreneurship Monitor; GEM, from 2000 to 2007. We put emphasis on necessity-based entrepreneurship because this type of activities face relative high rates on Latin-American context. The results show that economic development is effectively negative related with necessity-based entrepreneurship. Other factors like perceived corruption and unemployment are positive related with major levels of the necessity-based rates. Future research lines and policy implications are discussed.

1. Introduction

The role that entrepreneurship plays as factor that explain the growth of an economy is quite recent (Acs and Storey 2004; Wennekers and Thurik 1999). Researches regarding economic growth undertaken last century claimed that capital and labor were the sources of economic growth (Solow 1956). The firm was seen as a chain of contracts that showed the transaction's costs (Coase 1937). Later, knowledge was included among the factors that explained economic growth. Scholars believed that companies should be large organizations (Chandler 1990) as knowledge was too expensive and advanced for small business to handle and as success at the international level was associated with larger companies (Gomes-Casseres 1997). During the last

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years, it has been highlighted that entrepreneurial capital and the later creation of small business are vital factors regarding economic growth (Audretsch and Thurik 2001, 2004; Audretsch and Keilbach 2004.)

New firms contribute with competition by means of the increase in quantity and variety of companies. The increase in competition embodied in new methods and new ideas that allow companies to progress, enables the market to find a demand for new companies to support certain niches or particular features of those ideas (Jacobs 1969). In turn, this supports the idea that entrepreneurship contributes with variety and new approaches to the relevant industries (Wong, Ho and Autio 2005), at the same time, allowing the companies to contribute to the creation of employment. Birch (1979, 1981, 1987) stated that in the United States most of new jobs tend to arise from smaller businesses.

Therefore, new ventures acquire an important role on the development of economic policies but at the same time the creation of these policies should arise a complete understanding of entrepreneurship phenomena. Based on this, one of the starting points is the understanding of the reasons that gave birth to entrepreneurs, the features that characterize them, and the effects of such features on the different parameters of their performance. Regarding the typologies of entrepreneurship, it is important to distinguish those entrepreneurships that start with the intention of exploiting an opportunity, in most cases searched for, from those that arise from the lack of labor options for example, necessity-based entrepreneurs.

Based on this typology, the Global Entrepreneurship Monitor (GEM) research project distinguish the necessity-based entrepreneurial activity from the opportunity-based entrepreneurial activity. Both types of entrepreneurship conform what GEM calls early stage entrepreneurial activity (TEA). The difference between both types of entrepreneurship lies on the entrepreneur's motivation (Block and Wagner 2007; Reynolds et al. 2002; Sternberg et al. 2007).

In accordance with Bosma et al. (2008), opportunity-TEA consists of those individuals who claim they take advantage of a market opportunity that leads them to the entrepreneurial activity. In turn, necessity-based entrepreneurships are aimed to procuring an income that cannot be obtained through other means. In other words, in this case, "be entrepreneur" is the best alternative for those individuals who have not been able to find a job (Reynolds et al. 2005, p. 217).

A priori, it cannot be stated that this difference poses supremacy of one type of entrepreneurship over the other. Some scholars believe that higher rates of opportunity-based entrepreneurships are preferred to higher rates of necessity-based entrepreneurships (Acs et al. 2005; Acs and Varga 2005). On the other hand, Block and Sandner (2007) discovered that opportunity-based entrepreneurs stayed as self-employed for a longer period of time than necessity-based entrepreneurs, but this difference was explained by the fact that the opportunity-based entrepreneurs were able to set their entrepreneurial activities in relation to an occupation that they had already learned. Once this advantage of opportunity-based entrepreneurs was taken into account, differences were not meaningful. Block and Sandner (2007) state that the importance of the necessity-based entrepreneurship shows some of the starting disadvantages that these entrepreneurships suffer: the opportunity-based entrepreneur

has choices while the necessity-based entrepreneur does not, this means that the entrepreneur will have to embark even when the conditions are not the right ones, as when the entrepreneur's educational profile is not aligned with that of his/her entrepreneurship.

The object of this study is to find, among idiosyncratic factors from developing countries and, especially, Latin America, elements additional to those stated in the literature that will allow for a correct interpretation of the meaning of the necessity-based entrepreneurships seen in each of the countries of the region and, therefore, be able to contribute to the development of adequate policies in order to improve the quality of entrepreneurial activities. The Latin American countries that are members of GEM show high necessity-based entrepreneurship rates, which is common in many other developing countries. As it was earlier stated, we need to fully understand the factors that have effects on those levels and on their development, as vital input at the moment of generating political suggestions.

This study consists of several sections: in the next section you will find an assessment of the literature regarding necessity-based entrepreneurship determining factors, the characteristics of developing countries, and hypotheses generated based on the literature cited; next, in the third section we show a description of the econometric model and of the sources of data used; results are reported in the fourth section, and, finally, implications are discussed from the politics point of view and some ideas regarding further studies are in the last section.

2. Literature and Hypotheses Assessment

2.1 Entrepreneurship, Income and National Economic Growth

An increasing number of studies emphasize the relationship between entrepreneurship (business ownership rates) and economic growth, which is generally measured by the gross domestic product per capital income level. Moreover, it is difficult to understand the causality between entrepreneurial activities and economic development at the country level. Some studies emphasize the effect of economic growth or economic development on countries' entrepreneurial rates (Wennekers et al. 2005), while others focus on the effect of entrepreneurial activity on national economic growth (van Stel, Carre and Thurik 2005). Carre et al. (2002, 2007) are a special case in that they develop a simultaneous equation model for economic development and business ownership rate.

Yamada (1996) found a strong negative correlation between self-employment participation data and the level of economic growth of countries by analyzing data from the World Bank's World Development Report 1992 on 31 countries that reflected different stages of economic growth. This relationship weakens in the case of developed countries. Yamada explains this relationship through several factors. First, the scarce consumption ability of less developed countries does not generate the scale needed for the creation of large companies. In these countries, a large portion of self-employment activities consist in providing services related to the repair of items that in developed countries are directly discarded. On the other hand, economic development provides more resources to governments allowing for the development of skills to improve

taxation that will lead, among other things, to the decrease in entrepreneurships, the competitiveness of which is based on tax evasion or regulation non-compliance.

Blau (1987) and Acs et al. (1994) were among the first that proposed this “U-shape” relationship between entrepreneurial rates (self employment) and economic development. Carree et al. (2002), Wennekers et al. (2005), Belso-Martínez (2005) and Amorós and Cristi (2008) also found a “U-shape” curve. Carree et al. (2007), using data for 23 OECD countries, revisited the “U-shape” approach and proposed an “L-shape” curve to describe the effect of economic growth on entrepreneurial activities.

GEM has systematically discovered throughout the years a relationship between entrepreneurship levels and the economic development level that follow a “U-shape” curve. (Bosma et al. 2008, 2009). Under the U-shape curve approximation, Latin American countries are on the decreasing phase of the curve. The explanation of this phenomenon would be the following: “In countries with low levels of per capita income, the national economy is characterized by the prevalence of many very small businesses. As per capita income increases, industrialization and economies of scale allow larger and established firms to satisfy the increasing demand of growing markets and to increase their relative role in the economy. An important factor for achieving growth is the presence of macroeconomic and political stability, which is reflected by the development of strong institutions. The increase in the role of large firms may be accompanied by a reduction in the number of new businesses, since a growing number of people find stable employment in large industrial plants.” (Bosma et al. 2008 p. 13). This statement has been empirically contrasted in the case of Latin America by Acs and Amorós (2008), and Amorós and Cristi (2008).

Due to the fact that Latin American countries show low and middle levels of per capita income, it might be possible to find a negative correlation between development and necessity-based entrepreneurships; therefore:

H1a: Per capita income increase in Latin American countries leads to a decrease in necessity-based entrepreneurship levels.

As we have already referred, authors like Blau (1987) and Acs et al. (1994) have found that the relation between economic development and levels of entrepreneurship adopts a form of “U”, relation that is corroborated by the results that the GEM (Bosma et al. 2008, 2009) has systematically obtained along the years. When one discriminates the entrepreneurship by necessity and opportunity, it exists an inverse relation between entrepreneurship by necessity and economic development. The process of economic development deciphered before generates changes in the productive structure of the country that derive in a greater productivity from the manual labor and greater use, reducing the entrepreneurship by necessity.

Even though in the long term, development affects the structure and productivity of companies and, at the same time, creates paid jobs that are attractive to prospective entrepreneurs, in the short term, the companies’ productivity does not vary substantially. In the short term, economic growth should have the opposite effect to that stated in the previous hypothesis, i.e., economic growth should encourage entrepreneurial activity by creating an environment where identified risks of and expected income from entrepreneurial activity would improve more than advances in

paid jobs. In the case of the entrepreneurs by necessity, our hypothesis is that within the unemployed ones who have not found a job in spite of the increase of the economic activity, this more stimulating atmosphere would take them to undertake.

H1b: There exists a positive correlation between the per capita GDP growth rate and entrepreneurial by necessity activity levels.

2.2 Unemployment and Necessity-Based Entrepreneurship

Studies on the relationship between unemployment and the level of entrepreneurship have not been able to reach conclusive results. In some studies, Robson (1996, 1998b) discovered that unemployment had a depressing impact on entrepreneurship in the United Kingdom, while Robson does not find such relationship in other countries (1998a), it being similar to that found by Abell et al. (1995), and Parker and Robson (2004). On the other hand, there exists a set of studies that discovered that an increase in unemployment would increase the number of new entrepreneurs. Among these studies are those of Bogenhold and Staber (1991), and Acs et al. (1994), both on OECD countries and one on United Kingdom local markets conducted by Cowling and Hayward (2000). There exists a non-conclusive study conducted by Blanchflower (1998) on OECD and another by Cowling (2003) on United Kingdom local markets. In a later study, Cowling and Bygrave (2003) assessed the relationship between necessity-based entrepreneurship and unemployment in general, and, in particular, youth unemployment. For this study, they analyzed data from 37 GEM 2002 countries. The only hypothesis of which evidence is found is that which refers to the impact of young people on unemployment, i.e., when their participation within a country increases, necessity-based entrepreneurship increases.

Cowling and Bygrave (2003), and Parker and Robson (2004) agree on their interpretation of the fact that unemployment has contradictory effects on entrepreneurship. On the one hand, when unemployment rises, unemployed individuals will most probably think that job opportunities have become scarce or less attractive and decide to set up a business. However, as unemployment rises, the amount of people thinking that setting up a business is an alternative increases. These statements would lead to an unemployment-entrepreneurship positive relationship. But the increase in the unemployment rate might show that there exists a global reduction of the economic activity level, creating conditions seen by the unemployed as less favorable to start a successful entrepreneurship. Starting a business implies a risk that reduces when the entrepreneur knows that in the event he/she failed, he/she would still have other labor opportunities. These reasons lead to a negative unemployment-entrepreneurship relationship.

Even though no conclusive evidence has been found regarding the unemployment-entrepreneurship relationship, as it is possible that the contradictory effects that unemployment has on entrepreneurship have different degrees of impact in each case in particular; we believe that it is foreseeable to find a positive correlation in Latin American countries. The difference primarily lies on the fact that in the case of developed countries the generous unemployment benefits give individuals the chance to wait for a job opportunity during longer periods of time. In the case of youth unemployment, faced with the lack of job opportunities, young people may decide to

continue studying and, in the mean time, rely on the economic support of their families. Both factors should lead to a positive correlation much weaker in the case of youth unemployment. Therefore:

H2a: The increase in unemployment leads to an increase in the necessity-based entrepreneurship.

H2b: The increase in youth unemployment leads to an increase in necessity-based entrepreneurship.

2.3 Income Tax, Unemployment Benefits and Entrepreneurship

Parker and Robson (2004) were able to identify the determining factors of self-employment rates of 12 OECD countries for the period 1972-1996. They used a wide range of explanatory variables that had been collected by previous literature, to wit: per capita income, participation of women in workforce, participation of labor in the GDP, income tax, employees contributions to social security (which results in the income tax average rate), employers contribution to social security, and unemployment benefits. They found that self-employment was positive and substantially related to unemployment benefits and women's participation in the workforce.

In accordance with Parker and Robson, the correlation found between income tax rates and self-employment has background in the literature: Blau (1987), Parker (1996, 1999, 2001, 2003), Robson and Wren (1999), Bruce (2000), and Scheutze (2000). High income tax rates usually allow those who are self-employed differential expense deductions related to their work, as well as evasion, which represents an economic advantage over those who are employed.

On the other hand, unemployment benefits work as a discouragement to self-employment through several channels. Firstly, self-employment is discouraged because such status implies the loss of those benefits. Moreover, as the self-employed lack the employment benefits that employees have access to, high benefits discourage employees from leaving their jobs to start a business on their own, as they are afraid of losing such benefits. Staber and Bogenhold (1993) had discovered a negative correlation between unemployment benefits and self-employment at the OECD.

In turn, income tax encourages entrepreneurial status as opposed to employed status. However, inflation can act as a tax on income and it is felt as such. Inflation's tax differs from ordinary taxes in that it incorporates an uncertainty element, as it is not certain how much income will finally be deducted and which variations will take place in this respect. Therefore, we believe that inflation behaves as a stimulus for entrepreneurial activity as the entrepreneur has more independence than the employee to regulate his/her net income in order to be able to keep the actual income. On the other hand, inflation creates more labor conflicts that arise from the companies' implementation of more conservative policies regarding personal employment. Contracting employment policies will lead to the scenario where for many individuals job alternatives will not exist and where paid jobs are less attractive as those companies' protecting policies not only reduce activity levels but also create an overload of work for those individuals the companies employ.

It is possible that informality will have the opposite effect: it shall act as an “exemption” from income taxes. In that respect, it is expected that the rise in informality levels leads to increases in entrepreneurial levels.

Latin America is characterized by a high inflation volatility, which is considered in our model as equivalent to a high and uncertain tax pressure. At the same time there is not an important protection of employ, which takes to a high level of informality. We consider that the effects that the inflation and informality have on entrepreneurship by necessity and opportunity will be similar, although with different emphases. In the case of the entrepreneurship by opportunity it will be more important the attractiveness loss of attractiveness of the jobs caused by these phenomena. In the case of the entrepreneur by necessity it will be its pernicious effect on the jobs creation. From these elements we propose:

H3: The rise in the inflation rates generates greater necessity-entrepreneurship levels.

H4: The rise in the economy’s degree of informality generates greater necessity-entrepreneurship levels.

2.4 The Existence of Entrepreneurial Skills and their Impact on Wages

In many cases the being an entrepreneur by opportunity or necessity will depend on the personal circumstances. In addition to the examination of those factors it is necessary to analyze if there are differences based on the skills and capacities of the entrepreneur. The starting point of Blau (1985) is that there exists a variable that is not capable of being observed: the “entrepreneurial skill,” which is of importance at the time the individual has to choose between self-employment and a job. This statement is supported by several studies that contribute empirical evidence regarding the fact that self-employed people from developing countries have greater income than their counterparts who are employed (Rosenzweig 1980; Chiswick 1977; Bertrand and Squire, 1980; Teilhet-Waldorf and Waldorf 1983; Mazumdar 1981; Blau 1984; House, 1984; Sumner 1981). This would be consistent in the case of competitive labor markets. The entrepreneur wins a price due to his/her entrepreneurial skill and the risks undertaken; these are features that distinguish him/her from those who are employed. Based on these statements Blau (1985) tries to analyze and estimate an individually chosen model between employment and self-employment within the context of countries with less relative development. This model states that entrepreneurs are not a random sample of the population regarding the entrepreneurial skills variable, which would be seen stronger among those who undertake entrepreneurial activities. The existence of minimum wages, trade unions, and certain employment practices within the public sector keep the labor market over the balance point, creating an excess of job offers in the market. In this respect, in the event staff employment criteria directly or indirectly took into account entrepreneurial skills (for example, because it is related to the education level), many individuals with entrepreneurial skills would chose to be employed as they would have advantages (to the extent reallocations are greater to the income they would receive in the event the market was in a clearing level, the individual with entrepreneurial skills chooses the most advantageous situation, as he/she does not

undertake risks). However, individuals with low entrepreneurial skills will have to choose to be self-employed, leading to low-income levels. This, in turn, will strengthen the negative perspective regarding self-employment among those who are employed and possess entrepreneurial skills.

The hypothesis that states that, in the absence of strong distortions in the labor market, self-employment generates more income than paid jobs has been proved by Yamada (1996) on informal self-employment and employment, based on the information from Lima, Peru, from 1985/86 to 1990, and a country comparative analysis based on World Bank's data. In this respect, the informal economy is the greatest indicator of lack of distortions in the market's natural performance.

To conclude, labor market regulations reduce job offers, but, at the same time, make the remaining positions more attractive. In the event a set of skills, which we have named "entrepreneurial skills" and can be used in any job position, existed, as labor market distortions increased – rising wages over the price set by the market – greater the level of necessity-based entrepreneurship would be. Faced with a higher compulsory minimum wage, the market is not cleared. Entrepreneurial skills would be useful to procure jobs that have become attractive enough to compete with the entrepreneurial option regarding the environment and risks. On the other hand, it may be thought that a competitive advantage of regulatory nature is created for those entrepreneurships that are able to provide services competing directly with paid jobs. Therefore:

H5: The higher the actual compulsory minimum wage is, the higher the level of necessity-based entrepreneurships will be.

2.5 Entrepreneurship, Corruption and Risk Perception

There exists another factor that may lead to differences between necessity-based entrepreneurship and opportunity-based entrepreneurship regarding entrepreneurial activity and risks. It is usually presumed that entrepreneurs are individuals particularly daring, however, studies do not provide evidence showing that these individuals are more prone to undertaking risks than those individuals who are not entrepreneurs (Brockhaus 1980; Brockhaus and Horwitz 1986). However, we all consider that entrepreneurs behave differently from those who are not. An alternative study approach is based on the cognitive theory (Palich and Bagby 1995). Pursuant to this theory, entrepreneurs do not necessarily prefer to undertake risky actions; they just see situations from a different point of view. They spot opportunities where others do not and they do not let threats prevent them from undertaking an entrepreneurial activity; they have more faith in their strengths and in their ability to surpass or counterbalance their weaknesses. Consequences are very important from the businessman training point of view, as the difference between entrepreneurs and non-entrepreneurs would have a vital dimension regarding differences in the understanding and assessment of business situations according to the skills they possess that may be altered by means of training providing the relevant analysis framework (Mount and Thompson 1987). Studies in line with cognitive theory would show that entrepreneurs possess more faith in their ability to meet the challenges that their surroundings pose. The faith they have in their ability to face threats – and, from time to time, to turn them into opportunities – is one of their most important elements that build their faith. Corruption is one of the clearest threats to

entrepreneurial activity (Amorós 2009). In this respect, we believe that the opportunity-based entrepreneur feels he/she is able to face the threat that corruption poses to his/her entrepreneurial activity while the necessity-based entrepreneur does not.

H6: When the perceived corruption rate increases, necessity-based entrepreneurship decreases.

3. Methodology

In order to prove the different aforementioned hypotheses, we will estimate econometrically models of panel data for Latin American countries. The dimension of time series that is added to the transversal dimension upon calculating data panel presents several advantages:

- Control among the countries by means of heterogeneity. The data panel assessment presumes that countries are heterogeneous and it allows controlling the effects that were not seen by country and by period of time. This is necessary because, otherwise, the estimates might be correlated with explanatory variables and, therefore, if omitted, estimates are blinded. In the case of vertical dimension studies, the country variable that is not observed is omitted and, therefore, only blinded estimates are obtained.
- Add variability and, first and foremost, informative content, therefore, panel data studies provide more information, more variability, and less collinearity among variables
- Study the adjustment dynamics, obtaining richer model specificity. It also allows for the analysis of the variation of the entrepreneurial activity rate through the economic cycle.
- Allows for the control of time effects that may affect equally all countries such as the world economic growth level, etc.

In particular, the following models of panel data will be estimated:

$$y_{it} = \alpha_i + X_{it}\beta + \lambda_t + u_{it} \quad i = 1, \dots, 10$$

where y_{it} is the entrepreneurial rate (TEA) with $t=2000, \dots, 2007$, opportunity entrepreneurial rate (OPP) and necessity entrepreneurial rate (NEC) with $t=2001, \dots, 2007$.

α_i is the country effect that has not been observed as the quality of the institutions, compliance with legislation, the quality of policies, etc.

For the purposes of explaining TEA, OPP, and NEC, the following X_{it} explanatory variables are considered:

- Gross domestic product GDP, per capita PPP.
- Growth rate of the gross domestic product

- Inflation rate
- Unemployment rate
- Youth unemployment rate
- Real minimum wages
- Corruption perception
- Informality

3.1 Data

The countries considered in the analysis were the following: Argentina, Brazil, Colombia, Chile, Ecuador, Mexico, Peru, Dominican Republic, Uruguay, and Venezuela.

The following Table 1 shows data source; the variables used in the analysis are shown next.

Table 1
Variables and Sources

Variable	Data source
Gross Domestic Product per capita	International Monetary Fund
Inflation	International Monetary Fund
Unemployment rate	International Labor Office
Youth unemployment rate	International Labor Office
Real minimum wages	International Labor Office
Corruption Perception Index	Transparency International
Informality	International Labor Office

GDP per capita derives from the International Monetary Fund and is measured in American dollars adjusted by Purchasing Power Parity. This allows for control of different purchasing power of American dollars in different periods.

Real minimum wages were set at a base of 100 in 1990.

The Corruption Perception Index is a composite index obtained by Transparency International arising out of several expert opinion polls that analyze perceptions on public sector corruption in 163 countries worldwide. It is the most ambitious issue of every CPI performed up to these days. It is a rating of countries according to a zero to ten ranking, where zero is the value indicating the highest levels of perceived corruption and ten is the value which indicates the lowest levels. The index ranks 180 countries according to their perceived corruption levels.

Informality index was obtained from the International Labor Office and is based on surveys conducted in homes with urban coverage. Said index is calculated as the proportion of workers with no social security coverage and no labor rights.

Table 2 shows descriptive surveys of data used in the economic analysis. The important variation in explanatory variables must be taken into account, therefore, for example, Latin American countries with a GDP per capita from USD 4,300 to USD

13,000 are considered

Table 2
Descriptive Statistics

	Observations	Average	Std. Dev.	Min.	Max.
TEA	37	16.4	8.0	5.3	40.3
OPP	35	10.4	5.8	3.4	29.6
NEC	35	5.9	2.9	0.9	13.1
GDP per capita	80	8166.5	2496.2	4595.7	13936.5
Economic Growth	80	5.4	5.3	-10.2	19.0
Inflation	80	9.6	13.1	-1.1	96.1
Unemployment	80	11.6	4.1	3.4	19.7
Youth Unemployment	80	22.6	8.7	4.1	40.0
Minimum Wages	79	137.8	67.6	47.0	433.7
Corruption	78	3.9	1.5	2.0	7.5
Informality	80	48.1	8.8	31.9	63.8

Source: GEM, IMF, TI, ILO.

The Table 3 shows the correlation coefficient between the different variables used in the economic analysis.

Table 3
Correlation Coefficient among Variables Used in the Analysis

TEA	OPP	NEC	GDP Per cap.	Corruption	Unemployment	Youth Unemployment	Minimum Wage	Inflation	Economic Growth	Informality
1										
0,98	1									
0,90	0,79	1								
-0,59	-0,48	-0,72	1							
-0,26	-0,23	-0,29	0,41	1						
0,17	0,08	0,37	-0,43	-0,35	1					
0,00	-0,07	0,18	-0,24	-0,15	0,88	1				
-0,17	-0,13	-0,23	0,32	-0,03	0,04	0,25	1			
0,09	0,00	0,28	-0,06	-0,39	0,52	0,39	-0,13	1		
0,09	0,19	-0,14	0,22	0,01	-0,33	-0,05	0,28	-0,42	1	
0,60	0,52	0,69	-0,81	-0,73	0,36	0,14	-0,21	0,20	0,00	1

4. Results

Table 4 shows the economic estimate results.

The results indicate that the rates of entrepreneurship depend negatively on the wealth of the countries approximated by their GDP per capita. This can be explained because we are considering solely to countries of low income and means. These results are consistent with our Hypothesis 1a. On the other hand, entrepreneurship is positively related on the economic cycle calculated by the GDP per capita growth rate. The higher the growth level is, the lower the entrepreneurship rate. This confirms Hypothesis 1b.

Results confirm a positive and significant correlation between unemployment and necessity-based entrepreneurship. This indicates that in the countries of Latin America the benefits by unemployment or the perception of adverse economic surroundings are not sufficiently powerful factors to dissuade the unemployed to try their entrance by the route of entrepreneurship. This confirms our Hypothesis 2a. Results also show a relationship with similar characteristics between unemployment and opportunity-based entrepreneurship. It may also indicate that when unemployment rises, there is a depreciation of paid job attraction to such an extent that the entrepreneur has the opportunity to set up his own business despite having a job and facing a difficult context. This is also related with Hypothesis 1.

Table 4
Panel Data Model Estimate Random Effects
(Standard errors in brackets)

	TEA	OPP	NEC
GDP per capita	-0.004 (0.001)**	-0.003 (0.001)**	-0.001 (0.0004)**
GDP Growth Rate	1.071 (0.384)***	0.812 (0.304)***	0.285 (0.112)**
Inflation	0.666 (0.259)**	0.486 (0.225)**	0.246 (0.083)***
Unemployment	3.881 (1.284)***	2.875 (1.029)***	1.082 (0.381)***
Youth Unemployment	-2.129 (0.621)***	-1.631 (0.490)***	-0.549 (0.181)***
Real Minimum Wages	0.026 (0.015)*	0.020 (0.012)	0.008 (0.004)*
Corruption Perception Index	1.602 (1.225)	0.702 (0.967)	0.983 (0.358)***
Informality	-0.347 (0.538)	-0.486 (0.433)	0.085 (0.160)
Constant	43.524 -41.864	44.947 (31.801)	2.462 (12.172)

Notes:

*** means 1% significance. ** means 5%, and * means 10%.

Regressions include temporary dummies.

According to Hausman test, the random effect model is the appropriate model.

On the other hand, results indicate that there is a negative and significant correlation between youth unemployment and opportunity-based and necessity-based entrepreneurship. This not supports our Hypothesis 2b. It is difficult to find possible explanations for the adverse effect that general unemployment and youth unemployment may have over different entrepreneurship types. For future research it should be explore the role that families and education could have in this results.

A positive correlation between inflation and entrepreneurial activity in Hypothesis 3 is proved. If our interpretation is correct, this can be explained because inflation behaves as an income tax. On the contrary, informality incidence as an explanatory factor has not been proved, consequently, Hypothesis 4 cannot be confirmed. While there is an inverse relationship between informal workers' percentage and per capita income, this relationship vanishes when a vast set of explanatory variables is controlled. A possible explanation for these results is that informality levels are so high in most

Latin American countries, with countries reaching 60%, that informality is not a distinctive advantage for entrepreneurs in relation to established companies.

Real minimum wages positively affect necessity-based entrepreneurship rates but they do not impact on opportunity-based entrepreneurship rates. This is consistent with Hypothesis 5.

Corruption Perception Index positively affects necessity-based entrepreneurship rate. As a result, lower corruption is associated with higher NEC. Consequently, corruption appears as a limitation to necessity-based entrepreneurship rate in Latin America, as it is shown in Hypothesis 6.

5. Future Research Lines and Policy Implications

Evidence shows that necessity-based and opportunity-based entrepreneurs have clearly different characteristics based on the existence of entrepreneurial skills. It is unclear whether they are real skills or it is a different self-perception among them. In the event they were real skills, it is still not clear if it is something “genetic”, that is, unable to generate said skills by means of the relevant training.

Apart from development level of the country measured in terms of per capita income, there are other factors that affect the entrepreneurship level of the economy, such as trust in macroeconomic policies, labor regulations, and institutional quality.

Explanatory variables of real wages and corruption affect opportunity-based and necessity-based entrepreneurship in a different way. Real minimum wages positively affect necessity-based entrepreneurship rates but they have no impact on opportunity-based entrepreneurship rates. This may indicate that regulations in labor markets drive those who are displaced from labor market to necessity-based entrepreneurship. Corruption Perception Index positively affects only the necessity-based entrepreneurship rate. It means that lower corruption is associated with higher NEC. As a result, corruption appears as a constraint to the necessity-based entrepreneurship rate in Latin America.

A set of future research lines is derived from this report. First of all, the absence of correlation between informality and necessity entrepreneurship by the use of different data to study informality in Latin America economy is analyzed more in depth. Secondly, the incidence of labor market regulations and their impact on entrepreneurship levels is explored more closely. Finally, the hypothesis of differences between opportunity-based and necessity-based entrepreneurs in connection with entrepreneurial skills, whether real or perceived, and their consequence in different threats/opportunities/strengths/weaknesses is verified.

References

- Abell, P., Khalaf, H., Smeaton, D. (1995). “An Exploration of Entry to and Exit from Self-employment,” *Centre for Economic Performance, London School of Economics*, Discussion Paper No.224.
- Acs, Zoltan J., and J.E. Amorós (2008). “Entrepreneurship and Competitiveness Dynamics in Latin America,” *Small Business Economics*, 31(3), 305-322.

- Acs, Zoltan J. and D.J. Storey (2004). "Introduction: Entrepreneurship and economic development," *Regional Studies*, 38(8), 871-877.
- Acs, Zoltan J. y A. Varga (2005). "Entrepreneurship, agglomeration and technological change," *Small Business Economics*, 24, 323-334.
- Acs, Zoltan., J., Audretsch D., and D.S., Evans (1994). *The determinants of variations in the self-employment rates across countries and over time*. London, UK: Centre for Economic Policy Research. Discussion paper DP871.
- Acs, Zoltan, J. Arenius, M. Hay and M. Miniti (2005). *Global Entrepreneurship Monitor 2004 Executive Report*. Babson College, London Business School.
- Amorós, José, E., and O. Cristi (2008). "Longitudinal analysis of entrepreneurship and competitiveness dynamics in Latin America," *International Entrepreneurship and Management Journal*, 4(4), 381-399.
- Amorós, José. E. (2009) "Entrepreneurship and Quality of Institutions" UNU-WIDER (World Institute for Development Economics Research) Research Paper No.2009/07.
- Audretsch, David and M. Keilbach (2004). "Entrepreneurship and regional growth: an evolutionary interpretation," *Journal of Evolutionary Economics*, 14(5), 605-616.
- Audretsch, D and R. Thurik (2001). "What is new about the new economy: Sources of growth in the managed and entrepreneurial economy", *Industrial and Corporate Change*, 10(1), 267-315.
- Audretsch, D and R. Thurik (2004). "Model of the entrepreneurial economy", *The Papers on Entrepreneurship, Growth and Public Policy*, Max Planck Institute, Jena, 17.
- Audretsch, D., M., Carree, and A., Thurik (2001). "Does Entrepreneurship reduces Unemployment?," *Tinbergen Institute Discussion Paper 01-074/3*.
- Bertrand, Trent and L. Squire (1980). "The Relevance of the Dual Economy Model: A Case Study of Thailand," *Oxford Economic Papers*, November, 480-511.
- BID (2006). *Annual Inform 2005*. Ed. J. Ferriter. Washington, D.C.: Inter-American Development Bank.
- Birch, D. (1979). *Job Creation in America*, New York: The Free Press.
- Birch, David L. (1981). "Who Creates Jobs?," *The Public Interest*, 65, 3-14.
- Birch, D. (1987). *The Job Generating Process*, Cambridge, MA.: MIT Press.
- Blanchflower, D. (1998). "Self-employment in OECD Countries", dissertation Canadian International Labor Network Conference. Burlington, Canada. 24-26.
- Blau, David (1985). "Self-Employment and Self-Selection in Developing Country Labor Markets," *Southern Economic Journal*, 52(2), 351-363.
- Blau, David (1987). "A time-series analysis of self-employment in the United States," *Journal of Political Economy*, 95(3), 445-467.
- Block, Jörn; S, Philipp (2007). "Necessity and Opportunity Entrepreneurs and Their Duration in Self-employment: Evidence from German Micro Data", *Journal of Industry Competition and Trade*. On line first DOI:10.1007/s10842-007-0029-3
- Block, J., and M. Wagner (2007). "Opportunity recognition and exploitation by necessity and opportunity entrepreneurs: Empirical evidence from earnings equations", in Proceedings of the Sixty-Sixth Annual Meeting of the Academy of Management (CD). Ed. Solomon, George T., ISSN 1543-8643.

- Bogenhold, D., and U. Staber (1991). "The Decline and Rise of Self-employment," *Employment & Society*, 5(2), 223-239.
- Bosma, N., K. Jones, E. Autio and J. Levie (2008). *Global Entrepreneurship Monitor 2007 Executive Report*. Babson College, London Business School.
- Brockhaus, R. H. (1980). "Risk taking propensity of entrepreneurs," *Academy of Management Journal*, 23(3), 509-520.
- Brockhaus, R. H. and P. S. Horwitz (1986). "The psychology of the entrepreneur," in *The Art and Science of Entrepreneurship*. Ed. D. L. Sexton y R. W. Smilor, Cambridge, MA: Ballinger.
- Bruce, Donald (2000). "Effects of the United States tax system on transitions into self-employment," *Labor Economics*, 7, 545-574.
- Chandler, Alfred D. (1990), *Strategy and Structure in the History of the Industrial Enterprise*. Cambridge, Mass.: MIT Press.
- Chiswick, Carmel U. (1977). "On Estimating Earnings Funcions for LDCs," *Journal of Development Economics*, 4(1), 67-78.
- Coase, R. H. (1937). "The Nature of the Firm", *Economica*, 4(16), 386-405
- Cowling, M., and P. Mitchell (1997). "The Evolution of UK Self-employment: A study of government policy and the role of the macroeconomy". *The Manchester School*, 65(4), 427-442.
- Cowling, M, and R. Hayward (2000). "*Out of Unemployment*," Birmingham, UK: Research Centre for Industrial Strategy, University of Birmingham Business School.
- Cowling, M, and F. Greene (2002). *Evaluation of the PRIME Third Age Self-employment*. Pilot Scheme. PRIME, London.
- Cowling, M. and W. Bygrave (2003). "Entrepreneurship and Unemployment: Relationships between unemployment and entrepreneurship in 37 nations participating in the Global Entrepreneurship Monitor (GEM) 2002," Babson Kauffman Entrepreneurship Research Conference.
- Cowling, M. (2003). "Creating Local Opportunity", Department of Work and Pensions, Research Report. www.dwp.gov.uk/asd/. Acceeded on March, 30, 2009.
- Earle, John S., and Z. Sakova (2000). "Business start-ups or disguised unemployment? Evidence on the character of self-employment from transition economies," *Labour Economics*, 7, 575-601.
- Gomes-Casseres, Benjamín (1997). "Alliance Strategies of Small Firms," *Small Business Economics*, 9(1), 33-44.
- Gruber, J., and D. Wise (1998). "Social Security and Declining Labor-force Participation: Here and Abroad," *American Economic Review*, 88(2).
- Hessels, J., A. Van Stel, P. Brouwer and A. Wennekers (2007). "Social Security Arrangements and Early-Stage Entrepreneurial Activity," *Comparative Labour Law & Policy Journal*, 28(4), 743-774.
- House, William J. (1984). "Nairobi's Informal Sector: Dynamic Entrepreneurs or Surplus Labor?," *Economic Development and Cultural Change*, 1, 277-302.
- Jacobs, Jane (1969). *The economy of cities*, John Wiley, New York.
- López-Claros, A., L. Altinger, J. Blanke, M. Drzeniek and I. Mía (2006). "Assessing Latin American Competitiveness: Challenges and Opportunities", in *The Latin*

- America Competitiveness Review 2006*. Ed. López -Claros, A., World Economic Forum, Geneva: 3-36.
- Mazumdar, Dipak (1981). *The Urban Labor Market and Income Distribution – a Study of Malaysia*. New York: Oxford University Press.
- Meager, N., P. Bates and M. Cowling (2003). “Business Start-up Support for Young Adults Delivered by the Prince’s Trust: A comparative study of labor market outcomes”, Department of Work and Pensions, Research Report URN 293.
- Mount, M. K. and D.E. Thompson (1987). “Cognitive categorization and quality of performance ratings,” *Journal of Applied Psychology*, 72(2), 240-246.
- Palich, L. E. and D. R. Bagby (1995). “Using cognitive theory to explain entrepreneurial risk-taking: challenging conventional wisdom,” *Journal of Business Venturing*, 10, 425-438.
- Parker, Simon C. (1996). “A time-series model of self-employment under uncertainty,” *Economica*, 63, 459-475.
- Parker, Simon C. (1999). “The optimal linear taxation of employment and self-employment incomes,” *Journal of Public Economics*, 73, 107-123.
- Parker, Simon C. (2001). “Risk, self-employment and differential income taxation,” *Manchester School*, 69(1), 1-15.
- Parker, Simon C. (2003). “Does tax evasion affect occupational choice?,” *Oxford Bulletin of Economics and Statistics*, 65, 379-394.
- Parker, Simon C., and Martin, T. Robson (2004). “Explaining International Variations in Self-Employment: Evidence from a Panel of OECD Countries,” *Southern Economic Journal*, 71(2), 287-301.
- Peters, M, R. Cressy, and D. Storey (1999). *The Economic Impact of Ageing on Entrepreneurship and SMEs*, Forward Studies Unit, European Commission.
- Reynolds, P. D., S. M. Camp, W.D. Bygrave, E. Autio, and M. Hay (2002). *Global Entrepreneurship Monitor 2001 Executive Report*. Babson College, London Business School.
- Reynolds, P. D., N. Bosma, E. Autio, S. Hunt, N. Bono, I. de, Servais, P, Lopez-Gracia and N. Chin (2005). “Global entrepreneurship monitor: Data collection design and implementation 1998-2003,” *Small Business Economics*, 24(3), 205-231.
- Robson, M (1996). “Macroeconomic Factors in the Birth and Death of UK Firms,” *The Manchester School*, 64(2), 170-188.
- Robson, M. (1998a). “The Rise in Self-employment Amongst UK Males,” *Small Business Economics*, 10, 199-212.
- Robson, M. (1998b). “Self-employment in the UK Regions,” *Applied Economics*, 30, 313-322.
- Robson, M., and C. Wren (1999). “Marginal and average tax rates and the incentive for self-employment,” *Southern Economic Journal*, 65, 757-773.
- Robson, M. (2007). “Explaining Cross-National Variations in Entrepreneurship: the Role of Social Protection and Political Culture,” presented at the conference on Entrepreneurship: Law, Culture, and the Labor Market, Chicago, March.
- Rosenzweig, Mark R. (1980). “Neoclassical Theory and the Optimizing Peasant: An Econometric Analysis of Market Family Labor Supply in a Developing Country,” *Quarterly Journal of Economics*, 94(1), 31-55.

- Scheutze, Herb J. (2000). "Taxes, economic conditions and recent trends in male self-employment: A Canada-U.S. comparisons," *Labor Economics*, 7, 507-544.
- Solow, Robert (1956). "A Contribution to the Theory of Economic Growth," *The Quarterly Journal of Economics*, 70(1), 65-94.
- Staber, Udo, and Dieter, Bogenhold (1993). "Self-employment: A study of seventeen OECD countries," *Industrial Relations Journal*, 24, 126-137.
- Sternberg, R., U., Brixy and J. F., Schlapfner (2007). *Global Entrepreneurship Monitor. Länderbericht Deutschland 2006*. Universität Hannover e IAB.
- Sumner, Daniel A. (1981). "Wage Functions and Occupational Selection in a Rural Less Developed Country Setting," *Review of Economics and Statistics*, 63(4), 513-519.
- Taylor, M. (1996). "Earnings, Independence or Unemployment: Why become self-employed?," *Oxford Bulletin of Economics and Statistics*, 58(2), 253-265
- Teilhet-Waldorf, Saral and William H., Waldorf (1983). "Earnings of Self-Employed in an Informal Sector: A Case Study of Bangkok," 31(3) *Economic Development and Cultural Change*, 587-607.
- Van Stel, A; D. Storey and A. Thurik (2007). "The Effect of Business Regulations on Nascent and Young Business Entrepreneurship," *Small Business Economics*, 28, 171-186.
- Wennekers, S., and R. Thurik (1999). Linking entrepreneurship and economic growth. *Small Business Economics*, 13(1), 27-55.
- Wong, P K, Y.P. Ho, and E. Autio (2005). "Entrepreneurship, innovation and economic growth: Evidence from GEM data," *Small Business Economics*, 24(3), 335-350.
- Yamada, G. (1996). "Urban Informal Employment and Self-Employment in Developing Countries: Theory and Evidence," *Economic Development and Cultural Change*, 44(2), 289-314.

From Boom to Bust: A Comparison of Organizational Emergence During Unusual Business Cycles
by Israel Drori and Benson Honig *

We examine the implications of external environmental events as a critical component of organizational evolution. We use a case study approach to compare two examples of firms founded during periods of contrasting economic events – in particular, the “boom and bust” internet period that occurred between 1999 and 2002. Because the two organizations we study have contrasting competitive markets, we also seek to understand the implications for organizational emergence, when impacted by macro-economic factors, for firms that vary in terms of their institutional forces, high tech culture, and institutional aesthetic culture.

Introduction

Because organizations both emerge from and reflect a multiplicity of environments, their complexity has been attributed to a variety of factors. Scholars have previously studied the difficulties of adapting to new technologies, products or services, the ‘liability of newness’, access to needed resources, gatekeepers of diverse inputs such as capital or markets, as well as immature institutional environments and the lack of legitimacy (Aldrich and Fiol 1994; Stinchcombe 1965). Thus, the external environment is a critical factor in determining the characteristics, as well as the survivability of organizations emerging into any field (Aldrich 1979;McKelvey 1982). It stands to reason that environmental jolts, including economic, social, and political

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upheavals, will play an important role in determining the organizational structures, practices, routines and culture that emergent organizations develop and maintain (Peterson and Berger 1971; Morgeson and DeRue 2006). In particular, disruptive events constrain the ability of existing organizations to successfully anticipate or adjust to rapid environmental changes (Christensen 1997), providing some advantages to new organizations that don't carry extensive strategic plans, suggesting a liability of adolescence that provides some initial buffering (Fichman and Levinthal 1991).

How new organization emerge continues to be an important theme in the study of organization research. Considerable scholarship examines the process of organizational founding within the framework of an organization's life cycle and the changes incurred between and within the stages of the business development (Greiner 1972; Kazanjian 1988; Quinn and Cameron 1983). Relevant factors found related to the emergence stage include the importance of initial capital, organizational structure, centralization, risk-taking by leaders as well as the need to learn how to manage innovation (Van de Ven 1986). Furthermore, each stage represents certain characteristics and resources that reflect the organization's congruence with its business objectives, including the ability to adjust to the conditions in the environment and to establish a competitive position vis-à-vis its competitors (Porter 1980). The transformation from one stage to another frequently results from upheaval, such as a crisis of leadership during the start-up period (Greiner 1972; Van de Ven and Poole 1995). Critical events disrupt team activities, impacting their ability to accomplish tasks and objectives (Morgeson and DeRue 2006). Thus, the relationship between organizational leadership

However, while much scholarship examines the comparative impact of industry and market events on the life-cycle of a firm, less attention has been paid to the implications and impact of seminal events that exist or occur outside the industry or market, but otherwise impact the course of organizational development. In particular, despite the fact that organizations emerge in widely varying economic environments, the study of organizational births, growth, and death, rarely considers the implications of unusual market oriented events occurring in the broader socio-economic context. Yet, it is reasonable to expect that seminal events have a profound impact on the organizational identity of founding teams, much as they do for individual actors. This oversight can

most probably be attributed to both the difficulty in identifying seminal environmental and economic events while they are occurring, as well as the near impossibility of constructing ex anti a systematic comparative study at any one point in time. In order to understand the impact of seminal events, either researchers must contend with retrospective study (and all of its accompanying limitations), or be fortunate enough to have collected data during relevant periods. In this paper, we were provided with a unique opportunity to explore the latter utilizing two rich case studies, with the objective of helping to bridge an important gap in the literature.

The dynamics of the new venture life-cycle have been viewed from a variety of perspectives. Life cycle theory maintains that organizations pass through stages as a consequence of their age, experience, or product development cycles (Van de Ven and Poole 1995; Adler 1995). Gartner (1985), emphasizing the process of entrepreneurship as an interaction between the individual entrepreneur and her behavior, the organizational context, strategy, and the business environment. As a firm advancing through its life-cycle, the risk of failure decreases, the liability of newness is gradually eliminated, and the new venture enhances its learning capacity, developing links with relevant stakeholders. Routines that are appropriate at the birth of the organization, such as appealing to venture capital, become less relevant as the organization matures (Galunic and Weeks 2002). Even though the emergence process may be subject to unpredicted twists and turns, the entrepreneur's reaction tends to reflect her accumulated experience and learning (e.g Aldrich and Ruef 2006). This, in turn, determines the decision-making process, hence influencing the future direction of the new venture.

The Ecological approach maintains that the circumstances and context of the environment at time of founding have a direct impact on the enduring characteristics of the organizations' structure and operation (Hannan and Carroll 2000). On the face of it, such an assertion implies that survival is dependent on successful adaptation through selection of the individual organizations. Entrepreneurs have to judge factors such as structure, practices, competencies, resources and knowledge, which reflect on the venture's ability to initiate various alternative options for business development. Thus, although we know that both external and internal factors may affect the prospects of emergence and life prospects of a new firm, we don't have a theory of how actors within

the firm shape their course of action, and consequently the fate of their organization. We help bridge this theoretical gap by studying the life cycles of two firms, from their initial founding, claiming that the founder's choice of strategy is shaped by external macro-economic events that determine the course of the life-cycle of the organization well after its founding.

Because the incidence of founding increases during economic boom periods, and decreases during economic busts, few would argue that the overall economic environment is not an important element of a firm's subsequent evolution. However, scholars are essentially constrained to observing the seemingly random cycles of economic waves retrospectively, often as an unanticipated research event that may be viewed either as an opportunity or a nuisance. Yet, because organizational emergence occurs during periods of both booms and busts, there is reason to surmise that long range attributes associated with foundational qualities are reinforced as a result of macro-economic forces. Firms founded during periods of constraint and retrenchment may develop organizational cultures that exploit conservation, efficiency, and low cost activities (Porter 1980), while those founded during periods of expansion and vitality may develop cultural expertise focusing on innovation and the pursuit of high quality (and high margin) strategies. For example, Morgan Stanley, Allstate, Krispy Kreme, and Knoll were founded during the depression, and Genentech, Microsoft, and southwest Southwest Airlines were founded during recessions (Kedrosky 2008). Other companies founded during relative "boom times", include path breakers such as Ebay, Yahoo, and Google (Porter 2001; Cassidy 2003).

Thus, given our knowledge of the importance of path dependent processes, as well as the critical nature of a founding organization's organizational culture (Baron and Hannan 2005), the implications of the overall external economic environment may be an as yet unrecognized, yet critical, component of organizational evolution. To help bridge this gap in scholarly research, our case study seeks to compare two examples of firms founded during periods of contrasting economic events – in particular, the "boom and bust" internet period that occurred between 1999 and 2002. In framing these two case studies, we seek to provide some insight into a number of critical and hitherto unexamined questions of organizational evolution. For example, we seek to understand

“What is the differential impact of seminal macro-market events on the organizational evolution of emergent firms?” Further, we explore the question of how seminal events influence the competitive context on one hand, and institutional factors on the other, such as their regulative, normative, socially normative, and cognitive characteristics (Scott. 1995). We thus examine the ability of actors to employ strategies of action in line with their prevailing environments (Leca et al. 2008). Because the two organizations we study have contrasting competitive markets, we also seek to understand the implications for organizational emergence, when impacted by macro-economic factors, for firms that vary in terms of their institutional forces, high tech culture, and institutional aesthetic culture.

Organizational Identity and seminal events

Organizational identity includes an organization’s culture, core values, and distinguishing attributes (Elsbach and Kramer 1996). Recent scholarship holds that organizational identity is rather flexible and dynamic, reacting to both the external and internal environments (Gioia, Schultz and Corley 2000). Both environmental changes and technological changes have been shown to radically alter organizational identity, yielding considerable consequences in terms of organizational efficiency and performance (Barley,1986;Dutton and Dkerich 1991). Not only does change affect performance through altered identity, but routines established to manage change also affect organizational sensemaking. Sensemaking consists of the struggle to interpret the environment, so radical change and seminal events are likely to impact organizational outcomes. Studying the role of organizational resources during change, Feldman (2004) demonstrated that practices such as routines affect the creation of resources and correspondingly schemas and structure. Elsbach and Kramer (1996) found that cognitive distress caused by challenges to organizational status brought about selective affirmation and sensemaking processes, whereby actors altered their prominent field of interest to adjust to the external changing environment. Thus, the impact of change in the external environment may not only affect the resources available to an organization directly, but also indirectly through alterations in sensemaking that transform conceptions of organizational identity on the part of its members. Further, external events may trigger changes in external identity by altering the

way outsiders view the organization (Gioia, Schults and Corley 2000). Dutton and Dukerich (1991) show how a Newsweek article portraying homelessness on 42nd street altered the mission and identity of port authority employees and board members. A contemporary extreme example is the number of Ponzi schemes uncovered by the recent global economic collapse as outsiders take a closer and more critical view of the internal operations of many hedge and investment funds. However, identity changes are also apparent in the workings of well established corporate firms, including leading banks and industrial firms, whose diminishing public trust is exemplified by reduced bond ratings and falling share prices.

Thus, seminal environmental events are predicted to play an important role in the development and trajectory of organizational identity. By examining the organizational emergence and developing identity of two different firms, one a high technology firm, the other an artistic firm, both subjected to a seminal economic event (the dot-com boom and bust), we help bridge a gap in the literature that offers explanations regarding the impact and durability of seminal events on a firm's subsequent trajectory.

Method

Data Collection

The main method of collecting empirical material during the field work period for two different comparative case studies was ethnographic participant observation. Participant-observations focused on holistic empirical material collected by participating in the organization's activities and routines, as well as in professional and social events. This enabled the recording of a vivid narrative, as well as learning about both firms from the inside.

For "Avatar", we conducted participant observation and periodic visits and meetings that took place between 1995-1997, followed by a period of less intensive observation that occurred between 1998-2000. During the first period, the focus consisted mainly of observing graphic artists and programmers at their workstations in an attempt a) to understand Avatar's technology and products, and, b) to detect work habits and coordinating activities, including mutual interactions and contacts within the company. During this time we identified key informants. These individuals, both graphic artists and programmers, were the main source for recording and understanding Avatar's unique culture and the intricacies of the Internet boom, at

large. Participant observation in this period also entailed participation in daily staff meetings addressing technical and content details and documenting the process and implications of the organizational decisions taken during these meetings. Furthermore, weekly meetings with the founder became an established fieldwork practice. These meetings provided a unique opportunity to develop close relations with the founder. This, in turn, facilitated the researcher's acquaintance with the entrepreneur's worldview and values underlining his managerial and decision making style. During the second period, although marked by less extensive empirical material collection, we maintained a clear stake in the company's fate and benefited from ongoing empirical material collection. The research assistant, who actively participated in field empirical material collection during the first period, became a full participant taking up in 1998, the position of Avatar's Human Resources Manager (VPHR). The VP HR, having both an academic viewpoint and a managerial position in Avatar, provided valuable information and insights about the company during its entire life course.

For Connect, we engaged in periodical visits during the first 3 months of 2003. We interviewed the TMT, as well as 15 members who were with the company since its inception. For Avitar, these sessions, conducted over a period of 4 years, involved 146 interviews with 44 different members of the organization. We also interviewed visitors to the company, primarily clients such as two multimedia art directors of the companies that sub-contracting, three representative of VCs and graphic artists and programmers who explored job opportunities at Avatar. All interviews were tape-recorded and transcribed verbatim. Out of the 146 interviews, 45 interviews were repeated. They included all of the VPs and those who belonged to the founding team, which later assumed various management roles, and the key programmers and graphic artists within the various technological and content teams. A total of 12 interviews were conducted with the founder on issues ranging from practical and purposeful to more conceptual in nature. In addition, we conducted nine interviews with Avitar's external stakeholder; two with VC managers who led the first and second round of financing, and seven with ex-employees. The questions focused on issues such as Avitar's founding processes, the evolution of its special artistic and technological trademarks, current strategy, practices and routines, indications regarding its culture

and perceptions of the founder's vision, and his leadership and the prospects of the internet, at large. As the field research progressed, various other themes emerged such as internal conflicts and frictions or the viability of the business models.

Documentation. In addition to participant-observations and interviews, our studies of archival empirical material included the analyses of documents and minutes of meetings, as well as various publications such as pamphlets, public relations memos and company profiles. For example, we studied both business plans produced by the two firms, as well as public promotional material available both from the firms directly, as well as through the internet.

Empirical material Analysis

The empirical material analysis, by and large, followed a grounded theory approach (Strauss & Corbin, 1990). However, our interest in seeking to understand issues of internal and external legitimacy and their association with creativity stems from two interrelated processes. The first entailed a review of the initial conceptualization of the entire empirical material, as well as coding it into categories. Second, we followed 'template coding', which, in contrast to grounded theory, is based on 'open coding' (Strauss and Corbin, 1990) referring to the procedures of analysis which is grounded in a predetermined conceptual framework.

We began by coding each of the empirical material sources according to a chronological order which followed the life cycle of both Avitar and Connect, compiling five different empirical material files. The division was based on reviewing the memos attached to the daily notes, which provided details regarding events and comments hinted at during critical change in the life of each company. For example, we studied a memo indicating Avitar's founder's declaration during a company meeting that he decided to scrap the multimedia projects and focus, instead, on the internet. This decision was backed by planned organizational changes .

At the subsequent stage, we further divided our empirical material into preliminary categorization and conceptualization, along the life-cycle of the organization. This was carried out by sifting through our empirical material, engaging in the following tasks: identifying the preliminary categories and attaching relevant descriptive accounts

in the form of selected quotes and excerpts, including attaching memos which conceptualized their meaning (Miles and Huberman 1994).

Two case studies of organizational emergence

As we previously implied, it is difficult, if not impossible, to arrange a systematic comparative examination of the impact of booms and busts on the organizational evolution of any firm. Scholars are left to either impute, or exploit, opportunities that fortuitously present themselves in the course of ongoing research tangential to the overall macro-economic environment. In providing this comparison of organizational emergence, we acknowledge the relative randomness of the macro-environmental events that framed our two studies, but none-the-less provide us with a unique opportunity to compare and contrast organizational evolution in widely varying environments (Yin, 1984). In short, we were fortunate in having collected longitudinal data for two firms during contrasting periods booms and busts, characterized now as the “internet dot.com boom”, that occurred between 1999-2002, and the subsequent “bust”, that occurred between 2002-2003. Our resultant analysis conducted while these two firms were emerging allows us to examine evolutionary changes that occurred in relation to macro-economic forces, as well as observing to what extent they were similar, despite differing environments.

Case study 1: the economic boom:

“Avatar”, a firm that emerged into the boom environment as an emergent Dotcom, a major benefactor of the munificent environment provided by the dot-com boom of 2001. Avitar was founded by a group of graphic artists with the aim of pioneering a movement for a new computer graphic art form. Later in its life cycle, Avitar became a multimedia company, producing mainly CD titles. With the emergence of the Internet, Avitar soon aligned its artistic creativity and focused on developing 3D technology for the production and distribution of avatars, interactive media objects with built-in viral marketing capabilities. The company conceived itself “as a cutting edge, visual, digital arts Internet company that would bridge technology and art and revolutionize the way people and companies communicate on the net” (Company presentation for VCs, 1996).

Case study #2: the economic bust:

“Connect” was founded by two engineers who served together in one of the elite, technical military units in the Israeli Defense Forces (IDF). The company develops core technology for broadband fiber access systems. Connect was founded in 2001, during the peak of the Internet bust. From its inception, Connect was organized in three work teams: hardware, software and integration. It was headed by the two founding Co-CEOs, one was responsible for product technology and development, while the other was responsible for marketing. From the company's early days, marketing was located in the US. Connect's initial financing was based on private investors who were part of the founders' social network and later benefited from investment by Intel and a few VCs. In its early days, Connect's business strategy was based on selling its electro-optic components to generate income and becoming a "money machine, so they would be attractive to a larger company (Interview with the Co-Founder, 2003). In 2005 the company's sales reach \$30M, employing 150 people in Israel, US, Japan, China and Korea. In 2006. Connect was acquired by a Japanese chip maker for \$300M.

During the initial period of founding all the employees of the company were recruited from the founders' military-technological unit. The founder claimed that he deliberately decided to work only with his former peers "because we automatically understand each other and in the founding period I needed people like me, fully committed to the task in hand "(Interview, 2003). Following the raising of institutional capital, Connect accelerated both its product development and marketing activities. The basic work organization based on teams remained, although more teams with diverse tasks were created. Furthermore, the growth of the company following the raising of capital brought about the institutionalization of more a formal organization structure, mainly in adding headquarters functions, such as: HR, Finance and Operation. The new recruits were more diverse in terms of their professional skills and background. As the founder contended: "At the beginning we were 15 guys who just left the [army] 'unit' last week, now we are growing and bringing in new people and building an identity that reflects this new reality.

Although Connect was founded during the bust, its product and technological strategy was based on capturing a specific segment of the broad band niche, and opened up a unique business opportunity. During the bust period, mainly 2001-2003, the company was able to recruit the necessary resources to consolidate its structure, identity, operation and product development. Thus, during the first years of the bust, Connect was able to develop the necessary infrastructure and business strategy which enabled the company to take full advantage of the growth of the communication sector since 2004.

Findings

Avatar

Avatar began as a primarily artistic endeavor. As stated by the founder: As stated by the founder:

“When I started working, I set the rules to work- everything I did had to follow those rules: creativity and innovation. Every project had to be something new; the final touch on everything I did had to be of the highest standard. We never compromised creativity for business considerations. Even if the client wanted a simple presentation, we provided the best, and suffered the economic consequences. In the early days, we thought of Avatar as a group of artists who set themselves up to develop a new art form. Clients and projects were not a part of our consideration regarding what to do and what not to do” (Interview, June 1996).

During the boom, the transition from multimedia into an Internet-service business forced Avatar's founder to address a new set of technological and business-related demands. The tight coupling between Avatar's artistic vision and business pursuits during the firm's early days was diffused, as Internet industry developments called for more flexible and diverse developments beyond those related to artistic concerns. In particular, creative values ceased to be the central aim and no longer served as the ideological core of the organization's vision. The new thrust was to “bring life to the Internet” by developing a special new technology. Entering into the Internet service market required expanding the

scope of Avatar beyond the ideology of artistic values, to include business strategies. Survival in the Internet sphere would require constant change and competitive efforts to remain abreast of new Internet business developments to ensure that the organization retained its status as a “player”. Avatar’s adaptation to the Internet environment involved a complete termination of its multimedia and computer-game activities, while employing organizational “logic,” which was explained by the founder:

“We changed our priorities, working with new guidelines abruptly handed to us [by our contractor] that stated, in fact, that art and creativity were not enough. We suddenly realized that there were many things we didn’t know; our weaknesses were exposed. Eventually the visual results were not what we expected, not up to our standards, and it happened to an experienced and qualified team.” (Fieldwork, 1996).

Thus, the internet boom required the organization to make a concession and an identity change resulting in it no longer able to count on being an industry leader, as perceived during its multimedia days. During the Internet boom, a time of rapid change characterized by ambiguity and relentless searches for effective technological and business innovation, Avatar's founder employed strategies of action which addressed his perceived need to maintain the company’s relative advantage, its artistic values. However, this task proved to be detrimental to the company’s ability to survive. He channeled his managerial resources towards a continual effort to maintain the value of creativity, which became merely symbolic, thus providing 'ambiguous' signals for Avatar’s diverse workforce. Second, the founder failed in his attempt to streamline the company’s internal contradictions and conflicts. As described by Ronit, one of Avatar’s employees:

“There’s a feeling that Elan is surrounded by his own clique, mostly his old guard and the internet team, which keep him apart from everyone else. The company has an informal hierarchy. Elan is at the top; the men want to be like him and the women want to sleep with him.”

Meanwhile, the essence of Art’s traditional family-like culture, which had emphasized individuality, social cohesion and egalitarianism, gave way to the

formalization of working procedures and a more goal-oriented culture. the dot com boom represented an emergent industry and a seminal event. This required a comprehensive change in both the organizational norms and procedures, along with a resultant change in perceived identity. As Avatar's founder contended:

“It was an irony because you had to behave like other companies around you, to keep up a strong and appealing face to your clients and to the work force, and at the same time you are making all the mistakes that will lead to your death. We were spending money on company vacations, traveling around the US to try and get clients, moving to new offices, hiring a lot of people (some of them not complying with the high standards we set in the past), participating in shows and conferences, and so on. The feeling was that we had to do those things to succeed. You have to look strong and ambitious like your competitors.”

The company's homogeneity broke apart as distinctions were drawn along two lines: the first between the center (the Internet team, comprising both programmers and a few veteran graphic artists) and the periphery (the multimedia team); and the second, between graphic artists and programmers. Demarcations between the core and the periphery set off power struggles between rival cliques which vied for the founder's favors. These internal frictions eventually diverted critical managerial resources needed for integrating Avatar into the Internet business realm.

Thus, Avatar's creative values lost force on two accounts: firstly, by allowing an overly wide range of interpretations to be taken by different groups (especially divergent between designers and the programmers), and secondly, by becoming too abstract and detached from the everyday realities of the Internet business environment. In response, the founder attempted to develop and popularize a more functional version of Avatar's artistic path, but this proved to be alienating to many of its artists who preferred *pure artistic* –rather than strategic or functional artistic values. Thus, internal friction stemming from the legacy of founding, and compromised by the dot com bust, limited Avatar's ability to exploit the Dot-com cycle, resulting in the firm's demise:

“It was frustrating to see how we tried to speak with contacts we had in lots of companies and, one by one, many of our key contacts left

their companies. The Internet market collapsed entirely and big companies were shutting down everywhere. It was clear that the business model would not bring Art success; companies and consumers are not investing money in Internet applications.” Art's HR manager

Connect

The legacy of Connect is associated with two major aspects. The first, technological excellence, and the second, the homogenous background of its founding team. Being engineers in their formal education and training and members of an elite army technological unit equipped the founding team with the technological skills and superb knowledge of their intended technology. Furthermore, being attuned to the state of art of their industry (wireless internet chips), Connect's founders accurately identified specific 'empty' niche—optical network chips—and focused all their developing efforts to cater to this market segment. Second, being affiliated with the same army unit implies a unique cultural and human advantage during the early days of founding. The founding groups worked together, and were 'imprinted' with the strong values of total commitment to their task and to each other. Thus, the common past experience facilitated the creation of organizational culture which embodied norms and practices associated with the task in hand, quick and effective development of new technology and collective values of solidarity and commitment. In addition, from its inception, the founders emphasized a pragmatic strategy which focused explicitly on defining short term technological and marketing objectives bounded by strict deadlines and specific market demands. Such a strategy proved effective as it enabled the founders to harness Connect's limited resources during its first period of founding towards completing its technological development. The successful development of its technology enabled Connect to secure further capital and eventually faster growth, despite the inhospitable environment that persisted between 2001-2003, during the hey days of the internet bust.

Discussion and conclusion

The founding process of Avatar and Connect demonstrates how they reflected their environment. The study shows how each firm aligned its strategy, technology, structure and identity as a way to adapt to its changing environment. The companies' position in terms of their ability to survive was shaped by the genesis and founding events which, in turn, configured certain strategic and identity trajectory. The founding process and trajectory thus serve as bedrock for continual selection processes in which the managers of the respective organizations were active actors (Leca et al. 2008). They engaged in intentional actions of knowledgeable social actors aimed at pursuing their strategy in the varied contexts of the changing environments. Thus, both Avatar and Connect's strategies were based on a repertoire of actions which eventually portrayed both different selection mechanisms and adaptation mechanisms to varied environmental events. This heterogeneity in strategic action within diverse environments provides us with an explanation as to why environments associated with a bust may provide resilience and fit, as observed with Connect, contrasted with that of a boom environment, which led Avatar to its eventual demise.

References

- Alder, P. 1995. Interdepartmental interdependence and coordination: The case of the design manufacturing interface. *Organization Science*, 6 (2) 147-167.
- Aldrich, H. 1979. *Organizations and environments*. Englewood Cliffs, N.J.: Prentice Hall.
- Aldrich & Fiol 1994. Fools rush in? The institutional context of industry creation. *Academy management Review*, 19(4): 645-670.
- Aldrich and Ruef, 2006. *Organization Evolving*. Sage
- Barley, A.. 1986. Technology as an Occasion for Structuring: Evidence from Observations of CT Scanners and the Social Order of Radiology Departments." *Administrative Science Quarterly* 31: 78-108
- Baron, J. N and M. T. Hannan. 2005. "The economic sociology of organizational entrepreneurship: Lessons from the Stanford project on emerging companies." In V. Nee, and R. Swedberg (eds.), *The economic sociology of capitalism* (pp. 168-203). Princeton University Press.

Cassidy, J. 2003. *Dot.con*. Perennial.

Christensen, C. 1997. *The innovator's dilemma*. Boston: Harvard Business School Press.

Dutton, J and Dukerich, J. 1991. Keeping an Eye on the Mirror: Image and Identity in Organizational Adaptation. *The Academy of Management Journal*, Vol. 34,: 517-554

Feldman.M, F (2004) Resources in Emerging Structures and Processes of Change. *Organization Science* 15:3, 295-309

Fichman, M and Levinthal, D. 1991. Honeymoons and the liability of adolescence: A new perspective on duration dependence in social and organizational relationships. *Academy of Management review*, 16:442-468.

Galunic, D, and Weeks, J. 2002. Intraorganizational ecology in Baum, J. (ed) *The Blackwell Companion to Organizations*. Malden, Ma. Pp75-97.

Gartner, W., B. 1985. A Conceptual Framework for Describing the phenomenon of New Venture Creation. *The Academy of Management Review*. 10: 4, 697-706.

Gioia, D. Schultz, M. and Corley, K. 2000. Organizational identity, image, and adaptive instability. *Academy of Management Review*, 25(1) 63-81.

Greiner, L. E. (1972). Evolution and Revolution as Organizations Grow. *Harvard Business Review*. 50: 37-46.

Katz, J. and W. B. Gartner. (1988). "Properties of Emerging Organization." *Academy of Management Review*, 13 (July): 429-441.

Kazanjian, R. K., (1988). The Organizational Evolution of Technology-Based New Ventures: A Stage of Growth Model. *Academy of Management Journal*, 31: 257-279.

Elsbach, K and Kramer,R. 1996. Members' Responses to Organizational Identity Threats: Encountering and Countering the Business Week Rankings *Administrative Science Quarterly*, Vol. 41, No. 3 (Sep., 1996), pp. 442-476

Hannan and Carrol, 2000. *The demography of cooperation and industries*. NJ. Princeton University Press.

Kedowsky, P. 2008. *Entrepreneurs and Recessions: Do Downturns Matter?* Ewing Marion Kauffman Foundation

Leca et al. 2008. Agency and institutions: A review of institutional entrepreneurship. HBS Working paper, 08-096

- McCann, J and Selsky, J. 1984. Hyperturbulence and the Emergence of Type 5 Environments. *The Academy of Management Review*, Vol. 9:460-470
- McKelvey, B. 1982. *Organizational Systematics*, Berkeley, Ca: Univ. of California Press.
- Miles, M. B., A. M. Huberman. 1994 *Qualitative Data Analysis: A Sourcebook of New Methods*. Sage Publications, Beverly Hills.
- Morgeson, F., DeRue, D.S. 2006. Event criticality, urgency and duration: Understanding how events disrupt teams and influence team leader intervention. *The Leadership Quarterly*, 17:271-287.
- Peterson, R and Berger, D. 1971. *Administrative Science Quarterly*, Vol. 16, No. 1, *Organizational Leadership* pp. 97-106
- Porter, M. E. 1980. *Competitive Strategy*. New York: Free Press.
- Porter, M. E. 2001. Strategy and the Internet. *Harvard Business Review*, March: 62-80.
- Quinn, J. B. and Cameron, K. (1983). Organizational Life Cycle and Shifting Criteria of Effectiveness: Some Preliminary Evidence. *Management Science*, 29: 33-51.
- Scott, W. R. 1995 *Institutions and Organizations*. Sage, Thousand Oaks.
- Stinchcombe, L. A. 1965. Social structure and organizations. In James. G. March (ed.), *Handbook of Organizations*; 142-193. Chicago; Rand-McNally
- Strauss, A. and Corbin, J. M. (1990). *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Newbury Park, CA: Sage.
- Van de Ven, A. H. (1986). Managing the Process of Organizational Innovation. *Management Science*, 32:590-607.
- Van de Ven and Poole. 1995. Examining change and development in organizations. *Academy of Management Review*, 20:519-540
- Vesper, H. K. (1990). *New Venture Strategies*. Englewood Cliffs, NJ: Prentice-Hall.
- Yin, R. K. (1984). *Case Study Research*. Beverly Hills: Sage.

Table 1

Date	Stage in Life-Cycle	Methods of collecting data	Involvement
1993-1995	Founding	Interviews with the founder and the founding team. Company documents	Reconstruction
1995-1996	Multi-Media and Computer Games	Participant observation Interviews Internal documents, emails, memos, press releases	Researcher also provide consulting services on culture and structure change
1996-2000	The Internet	Participant observation (part time) Schedule interviews Company's documents and reports	Researcher and Art HR manager worked in cooperation
2000-2003	The Internet (decline and death)	Occasional interview Company documents and reports, press releases	Art's HR manager has provided continuing information including written reports Periodical update meeting with the researcher

Table 2

Date	Stage in Life-Cycle	Methods of collecting data	Involvement
2003	Founding	Interviews with the founder and the founding team. Company documents	
2004-2006		Participant observation Interviews Internal documents, emails, memos, press releases	

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**THE USE OF INFORMATION TECHNOLOGY AND INNOVATION IN
ENTREPRENEURIAL SMALL FIRMS
- *An Exploratory Study* -**

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THE USE OF INFORMATION TECHNOLOGY AND INNOVATION IN ENTREPRENEURIAL SMALL FIRMS - *An Exploratory Study* -

Abstract

This study explored the relationship of the entrepreneur's/founder's ability and skills and the company's strategic use of innovative information technology. A triangulation of the results based on 7 case studies in Canada, France, Germany, Italy, Spain, UK, and US coupled with a survey instrument found that the personal motivations and skills of the entrepreneur are important phenomena in small firms' IT-based innovation and business development. Also, prior work experience and the entrepreneurs' ability to "act thinkingly" and adapt to changes in market condition are valid explanatory phenomena. The study proposes the existence of a *digital mindset* and a winning formula based on a combination of customer focus, creation of an innovative firm-culture and social entrepreneurial skills to connect, merge, and optimize the resources available in the value chain.

Introduction

Much has been written about how the increase in the use of information technology (IT) has increased firms' effectiveness and their ability to innovate and improve performance and competitive advantage (Johannessen, Olaisen and Olsen 1992; Dibrell, Davis and Craig 2008). Often, however, the focus in the literature is on larger firms and on the relationship between IT investments and performance measured as snapshot of the firm and without an in-depth consideration of the context and the firms' development over time. Also, frequently the analysis describes the internal and external processes of a "going concern", i.e. an already established and operating organization, and the impacts for changes in the firms operating procedures based on IT- investments.

This study offers a more holistic perspective by investigating the impact of small firms' adoption of IT as a managerial and technical innovative resource. The study is based on a collaborative project between ICSB and DELL with the objective of learning more about how small firms use IT to innovate and serve their customers. Data for the study are from the winners and finalists of DELL's Small Business Excellence Award competition 2008.

In the following, the conceptual foundation of the research will be outlined. Thereafter the methodological approach of the study and the outcome will be discussed before drawing conclusions and giving recommendations on further research.

Conceptual foundation

Shuman and Seeger (1986, p.8) state that: “[...] smaller businesses are not smaller versions of big businesses... smaller businesses deal with unique size-related issues as well, and they behave differently in their analysis of, and interaction with, their environment”. Also, for many small firms, the owner-managers’ personality, in particular their values and goals are indistinguishable from the goals of their businesses (Kotey and Meredith 1997) and at the centre of all enterprise behaviour. Thus, “When a firm is led by a single top decision maker, as many small firms are, the cognitive processes of the CEO are arguably the same as those of the firm...” (Peteraf and Shanley 1997, p. 167). Consequently, it seems reasonable to deduce that small firms’ owner-managers (the CEO) play an absolutely central role in the firm’s entrepreneurial- and innovative process and are decisive in its use of IT.

In the following, the entrepreneur is viewed as an innovator (Schumpeter, 1911) and as an individual who are prepared to depart from the conventional in the pursuit of wealth, power, autonomy and/or prestige, and one who can be expected to follow the line of relative least resistance in pursuit of these goals (Dutz *et al.*, 2000) whether in form of new business projects within an existing business operation or as new business start-ups. Innovation is in the following broadly defined as the creation of and exploitation of new ideas (Kanter 2000). Based on a review of several bodies of literature – amongst other entrepreneurship, strategy, networking and information management - a conceptual model (Figure 1) was developed to guide the further research. In line with the literature, it was deduced that the CEO’s education may have an influence on the formation of a future

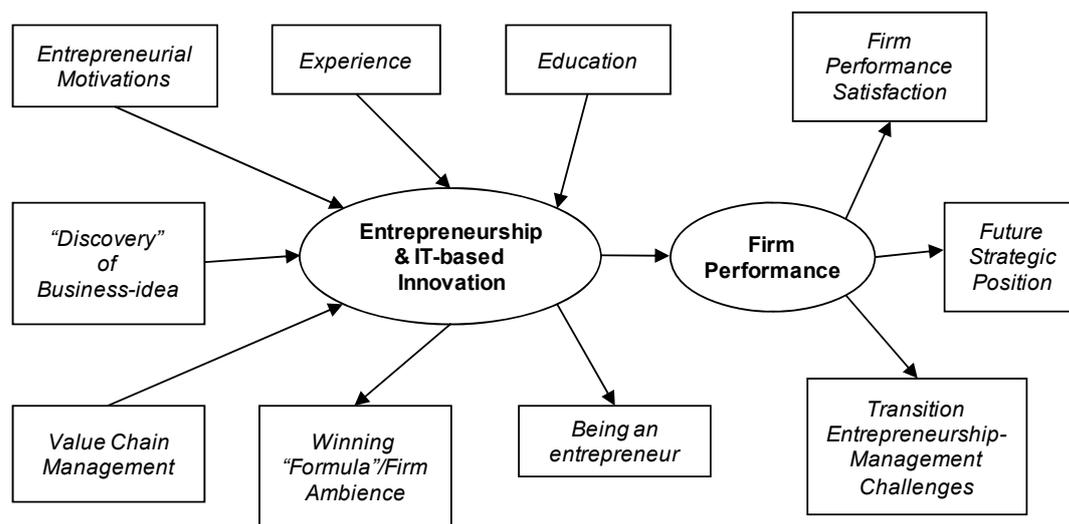


Figure 1: Conceptual Model

entrepreneurial mindset and innovative actions (Peterman and Kennedy 2003; Kruger 2003; Baron 2004). Similarly that experience, both personal and professional, will be an influencing factor (Baron and Ensley 2006; Mitchell *et al.* 2007). Further, specific indicators of entrepreneurial motivations (independence, self-reliance, pro-activeness, creativity,

internal locus of control) proposed to have an influence on entrepreneurship and innovation were identified (Haynie *et al.* 2008; Reitan 1997; Shane and Eckhardt 2003). Then indicators for the discovery of the business-idea construct were identified (Baron and Ensley 2006), particularly aiming at indicators determining the type of innovation (technical versus managerial) and through which processes the opportunity emerged in the business- and network context. Closely related to the discovery process, the concept of value chain management was evaluated based on the assumptions that interactions with actors in the value chain (suppliers, subcontractors, clients, collaborators) and other networking, likely will have an overall influence on the firm's entrepreneurial and innovative processes (BarNir and Smith 2002; Steensma *et al.* 2000; Greve 1995). Next, an attempt was made to capture the firms' winning formula, i.e. the managerial processes distinguishing the winners and finalists. The indicators eventually chosen for the construct as drivers of innovation and learning processes were ultimately partly based on experience and partly on substantive theory (Tidd, Bessant and Pavitt 2008; Heunks 1986; Nonaka and Takeuchi 1995; Senge 1990) and with specific support in the literature on measurement (Chandler and Lyon 2001). Eventually one indicator was left as a confirmation of the CEO's mission of "being an entrepreneur" based on the logic that this indicator will correlate closely with the latent entrepreneurship and IT-based innovation construct. For logical and technical reasons, it should be noted that the direction of the proposed (causal) relationship between the last two construct and the latent (indirectly measured) entrepreneurship and innovation construct is opposite (i.e. with causation from the entrepreneurship and IT-innovation construct to the reflective indicators). The reason for this is that the phenomena are interpreted to be preceded by the entrepreneurial and innovative action (the cause occurs before the effect) (Edwards and Bagozzi 2000).

With general support in the literature, the conceptual model is thus proposing a causal relationship between the IT-based entrepreneurship and innovation construct to firm performance (Dibrell, Davis and Craig 2008; Johannessen, Olaisen and Olsen 1999). The reflective indicators of the performance constructs have all substantive support in existing literature (Dess and Robinson 1984; Sadler-Smith *et al.* 2003; Scherer *et al.* 1984; Vaivio 2004). The measurement and causality appear relatively straight forward and intuitive – i.e. that IT-based performance improvement measures lead to observable and measurable results.

The conceptual model was developed as a theoretical foundation for the exploratory empiric research phase and as a tool for the interpretation of the findings. Table 1 illustrates the measurement instrument developed based on the review of the literature and gives an overview of the main constructs and measurement indicators. The indicators of the measurement instrument correspond item-to-item to the questionnaire developed for the quantitative data-collection (Attachment 2).

Methodological approach

The methodological frame for the empirical research phase is based on a triangulation of case studies of the national winners with a survey instrument developed based on the theory-based conceptual model and distributed to the national finalists in each country. The case studies have been developed based on the preparation of a case study guideline and an interview guide. After each interview (usually 3-5 hours with the CEO or another executive of the firm in the CEOs' absence) transcripts were prepared and followed-up with further questions as required. Additional secondary material (such as webpage-information, blogs, company plans and presentations) has also been reviewed depending on availability.

In addition, and with the purpose of amplifying the findings based on the interviews and subsequent case study essays, an electronic survey instrument (questionnaire) based on the conceptual model, and consisting of 61 variables, was developed and distributed to the national finalists (10 in each country) in 7 countries² by e-mail. After 3 reminders, 41 observations were received representing a response rate of 51%. All responses were complete with no missing data. Use of a small convenience sample is, in this case, found reasonable as far as the objective of the research is exploratory and generalization of the findings not intended.

The potential subjectivity and bias of the researchers during the data collection process, i.e. both during the interviews (and thus possibly reflected in the case studies) and during the development of the survey instrument (wording of the questions), have been sought controlled by engaging several researchers of different nationalities and cultures in the final research phase while leaving the initial preparation of the case studies to national researchers most familiar with the national winners' firms. Towards the end of the process, efforts have also been made to have the case studies peer-reviewed and audited by researchers not directly involved in the development of the cases.

² USA, Canada, UK, Spain, Italy, France, Germany

Qualitative research

Case study research and results

The following case studies were prepared and analyzed (Figure 2). As indicated, the cases are from very different industries giving ample material for comparison of IT-innovation processes.

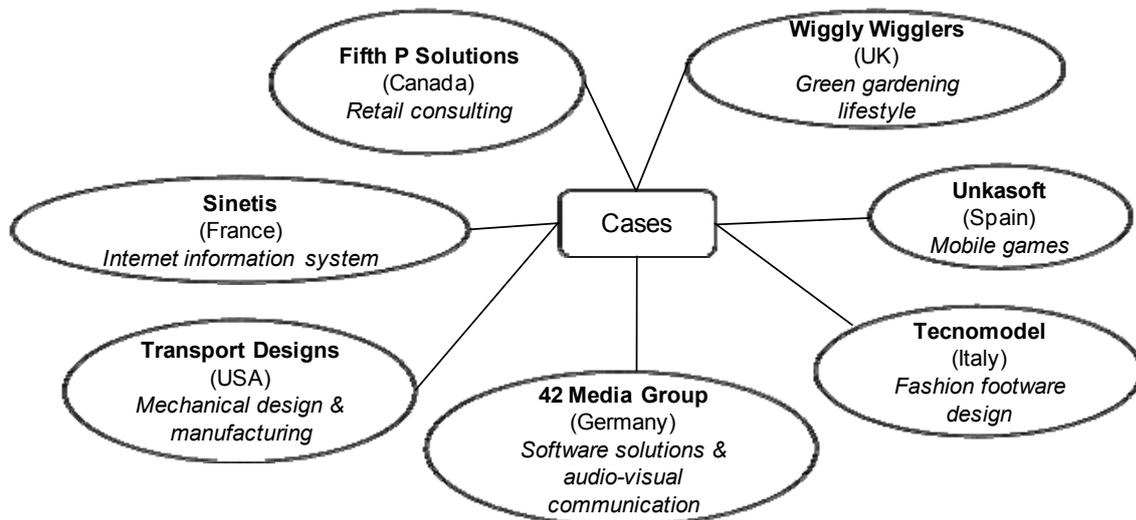


Figure 2: Casestudies of Winners 2008

- Fifth P Solution is a retail consulting firm offering services to clients based on web-based training combined with hands-on and minds-on practical training on the clients' premises. Founded in 1989.
- Transport Designs manufactures custom-made trailers for sports and industrial use. Founded in 1988.
- Tecnomodel offer design and managerial services for the fashion footwear industry. Founded in the early 1990s.
- Wiggly Wiggles produces and sells worms and compost products directly to the end-user. Founded in the early 1990s.
- Unkasoft provides services whereby clients may create their own mobile phone based marketing campaign. Founded in 2005.
- Sinetis provides a service for networking groups of remote PCs via the internet. Founded in 2000.
- 42 Media Group provides software solutions and services for audio-visual communications. Founded in 2005.

Based on an analysis of the interview transcripts some selective citations from the interviews of the winning CEOs are presented with the objective of shedding light on the

cognitive process behind their venture and their way of reasoning about IT-based innovation:

On technology:

- a) *"... I really think technology is the key to it, being able to make changes as quickly as possible. I thought when I first put this computer in and was starting to do my stuff on CAD, I was thinking, okay, it is going to give me a better product, a more accurate product, less time involved with trying to make sure this thing is right and give me more time at the end of the day, and what it has really done was it has allowed me to do more in the same amount of time".*
- b) *"... So instead of adding staff, I have been able to do a whole lot more with the technology but the technology is also not only what we were able to do with setting ourselves up strategically as far as our website, we are getting inquiries from all over the globe which is intriguing to me".*

On how technology is being used:

- a) *"... So it cost us some money - that very first project - it was \$140,000 project which at the time was a monster project for us. And for us to have to cut things apart and start all over again, it was frustrating to the guys but pretty satisfying to me that, well, the drawing actually is what it is and what I laid out is exactly what you got and you did not -- because I'm out there with a tape measure saying, "You guys did not put this in the right spot." They said, "Well, we did not think that we needed to do it like that," but it was obvious that it was wrong. So it was gratifying to know that the accuracy of the CAD drawing was what we needed".*
- b) *"...We are useless at inventing stuff and we did not win the Global Dell Award because we invented anything at all, we are useless at it. We are good at taking somebody else's invention and utilizing it".*
- c) *"... We have not invented Facebook or Twitter, we are not ever likely to do anything like that but we can definitely find ways of using it to connect with customers or suppliers or within the team and that is what I think our strengths are".*
- d) *"... So over the last number of years, we've built an agency that works with world-class brands and really our whole, sole purpose that we exist is we help enable brands to succeed through people" (underline added).*

On performance:

- a) *".... It was not something that we even set a goal at doing but we are finding out different ways that we are getting into these (more distant) markets and it is paying off pretty well".*
- b) *"...And I got to tell you it's just -- we've had a great run of this over the last five-six years. And despite our budget's still being somewhat in the training and the marketing area where theirs budget is softest right now, we're winning all kinds of business".*

Combining the interviews and the subsequent case studies, several common concepts are identified in spite of the differences concerning their sector, specific firm-context, stage in development and national culture. The concepts found to be overlapping between the national winners are illustrated in Figure 3.

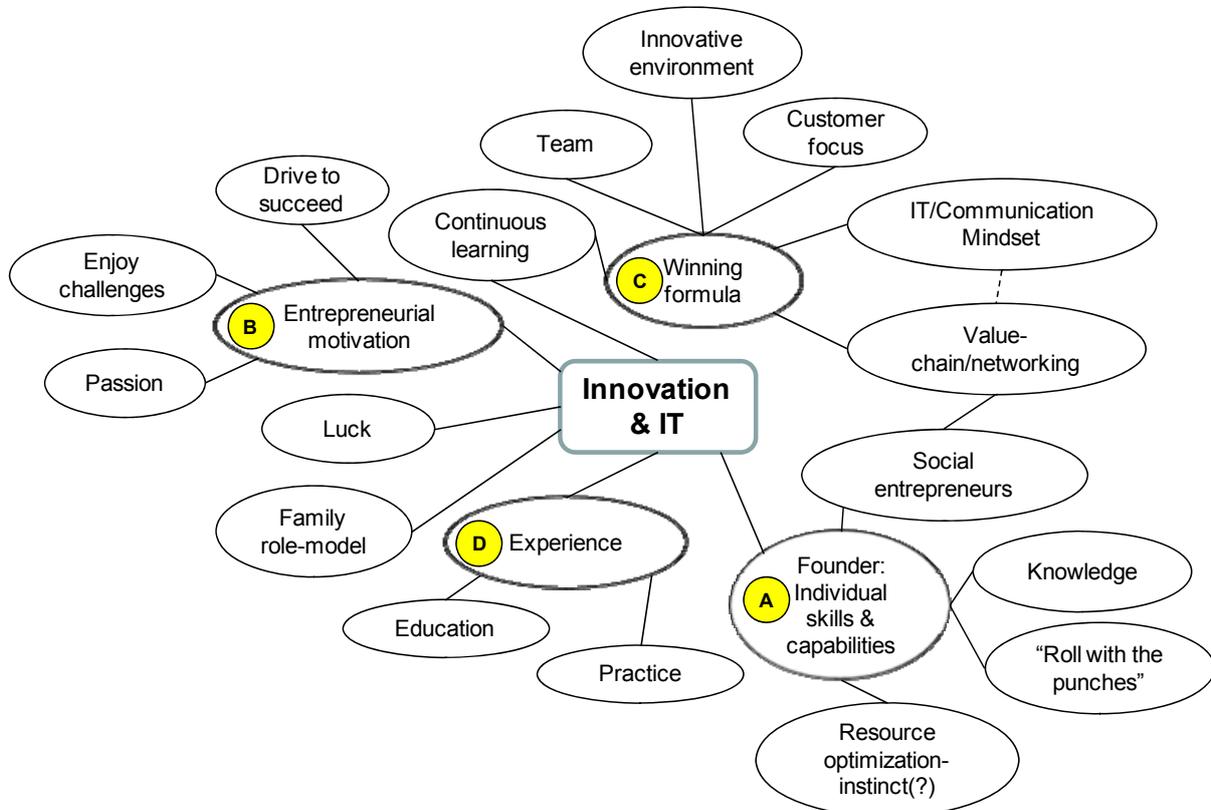


Figure 3: Winners' Common Features

First and foremost for the firms' entrepreneurial success appears to be the role, the energy and the individual skills and capabilities of the founder (Figure 3 - A). In the majority of the cases the driving innovator was one person, at least during the start-up phase. Common features or characteristics are primarily the knowledge and idea about a project they were pondering on doing. Curiously, this often did not develop in a "business school's" rational manner by developing a formal business plan (feasibility study, profit & loss statement, cash flow, etc.), but more in the form of a vision or absolute resolve to be independent and do something fun and meaningful. However, throughout the process from start-up to becoming a growing firm, the founders (in some phases more than one person) showed an, in retrospect, astonishing tacit capability of optimizing available resources (from achieving access to local raw materials, hooking up with local capable people or negotiating workable terms with suppliers and clients). This appears not as a controlled rational process, but more as an evolutionary adaptation and as an instinct of survival. All national winners show an ability to "roll with the punches" – avoiding being hit while simultaneously looking for a way ahead for their company and themselves. During the start-up phase (often 1-5 years) the founder (or a close-nit founding team) literally *is* the company.

Having skills and capabilities, the founder needless to say also has what may be categorized as an innate motivation for entrepreneurship (Figure 3 - B). Almost 60% of the founders (Appendix 1 – descriptive statistics) come from families with an entrepreneurial role-model and are used to the ups and downs of being a small firm CEO (the excitement, but certainly also the sometime end-of-the-month squanders and frustrations). All the winners have a clear drive to succeed in *their* project; they very much enjoy the challenge of creating something and being part of an independent and successful establishment. All have a living *passion* for what they doing and what they have done. They have created their dream and some of them, however not all, appear to be closely emotionally tied to their companies.

The national winners show clear common features regarding the winning formula (Figure 3 - C). The winning formula is here simply used as a metaphor for those key managerial elements which generally are in common among the firms up to this stage of their development while at the same time emphasizing that the strength of the observed phenomena vary between them. In interviews with the CEOs most of them emphasize first and foremost the skills and capabilities of their *team*. Other characteristics to be emphasized are an innovative environment and a managerial perspective focused on continuous learning - i.e. interdisciplinary collaboration, an environment open for learning through trial and error and freedom of opinion-exchange. In fact, several observations are as taken from a textbook in organizational learning (Argyris and Schön 1996; Senge 1990) with a particular twist suitable for resource-scarce small firms. Similarly, and with particular reference to most of the CEOs' level of attention to the human side of the organization, while simultaneously focusing attentively on innovation for the benefit of the final customer, a fine balance of contextual *ambidexterity*³ seems to be struck. I.e. a firm-ambience and management style which call for individual employees to make choices between alignment-oriented and adaption-oriented activities in the context of their day-to-day work (Duncan 1976; Birkinshaw and Gibson 2004).

Another phenomenon which appears to be fundamental in the success of the firms is the founders' (through their teams) early adoption of a *digital mindset*. They all, in their different circumstances and contexts, were able early on to perceive the utility of using IT in the various management disciplines of their firms and managed to digitalize their operation, gradually, to the maximum extent. The benefits of IT was thus perceived early and converted into a company resource and eventually developed to become a competitive advantage. See further discussion on this below. The use of *information* technology (here spelled out for emphasis) for all firms became over time absolutely crucial in their dialogue and communication with clients and suppliers. Due to the difference in operation and sector, the role of digitalized communications varies, however, widely between the firms, but the

³ Ambidexterity: A combination of adaptability (ability to move quickly toward new opportunities and to adjust to volatile markets) and alignment (and coordination) of current assets and resources to optimize operational performance and value creation (Birkinshaw and Gibson 2004)

principle is the same, digitalization is taken advantage of to the maximum extent possible to increase the quality of communications and to facilitate the dialogue and the contact with the market and with the members of the value chain.

Very important among the capabilities of the founder appear to be the skills as a *social* entrepreneur, i.e. skills in personal interactions (conversations, dialogues, collaborations, negotiations, pleading, reasoning, arguing, convincing, creating trust, etc.) with the members of the firms' value chain. Thus, for all the firms it appears as if IT (hardware and software) is only one more managerial tool, though a very important one, to gain additional efficiency and scope, while simultaneously maintaining the human element as the "glue and oil" which keeps the firm, the value-chain or the network together and in a state of fluidity .

Another, maybe not surprising finding is the observation that experience (Figure 3-D) appears as a fundamental element in the preparation of their entrepreneurial ventures. Among the national winners, all the founders had experience before starting up on their own. Most of them had specific experience in a somewhat similar firm and the majority had professional experience from different disciplines to draw on, some from entrepreneurial and relatively small firms. Some of the founders have higher education while, overall, the academic education does not seem to play a significant role in their later development as innovators and entrepreneurs beyond its general role as basic formation. Only one of the CEOs had participated in a local governmental educational program for entrepreneurs.

Common for all of the cases appears to be an element of good *luck*. In the interviews, this is sometimes with the benefit of retrospect described as a "chance meeting" with an "angle" (giving office space for free during the startup-phase, having support from parents/family, getting access to a special machine or computer software, etc.). Becoming aware of this *luck* may simply be a question of having the perceptive skills and guts to grab an opportunity when occurring by a coincidence. Certainly, however, it appears as if the CEOs possess capabilities to "run with the ball" when opportunity knocks. In all cases the instances of luck appear of great importance as does the entrepreneurs' ability to take advantage of them.

Finally, and maybe somewhat surprising from an academic perspective, none of the CEOs mentioned deep concerns about risk as a problem or bottleneck in the start-up or development of their ventures. They all appear convinced that they knew they were on to something and consequently possibly myopic (biased) and not able or willing to anticipate the risk of a possible failure.

Differences in degree of digitalization

Depending on the activity and operations of the firms, they are digitalized to a very different extent and in different manners. Those of the firms which are most technical and using IT to transfer or communicate technical data, and to a certain extent related

quantitative management information to clients and collaborators in the value chain, have digitalized their operation to the greatest extent. Examples on this are for instance Transport Design and Tecnomodel, both of which use digital technical drawing and drafts of design in their dialogue with clients and giving clients a possibility to comment and make counter-specifications in an accurate and effective manner. The operations are highly technical (based on laws of natural science and numeric measurements) and with much of the knowledge based on objective measures apt for codification and electronic transmission to and from (more or less) remote clients.

Fifth P Solutions and Wiggly Wiggles may be seen to be on the other side of the scale and much more dependent on subjective interpretations and less numeric dialogue and communication with clients in their operations. Consequently, these elements also appear to dominate their use of IT. These firms are digitalized in a different manner – that is a manner which allows a significant amount of “human touch” in the dialogue with clients and in the marketing of their services. The CEO of Wiggly Wiggles want to change the world to become more ecological (while making money) and this you simply cannot do with reference to a digital map or an electronic drawing. Here you need passion and communication skills to a much larger extent. A similarly observation may be made with reference to Fifth P Solutions. Here, the entrepreneur has added a fifth P by adding *People* to Kotler’s Product, Price, Production and Place (distribution), by making the human touch an absolute crucial element in their contact with clients and development of their service. In these cases it appears neither possible nor desirable to fully computerize the business and the firms instead rely on a much softer and subjective approach. The differences in digitalization and its context are illustrated in Figure 4.

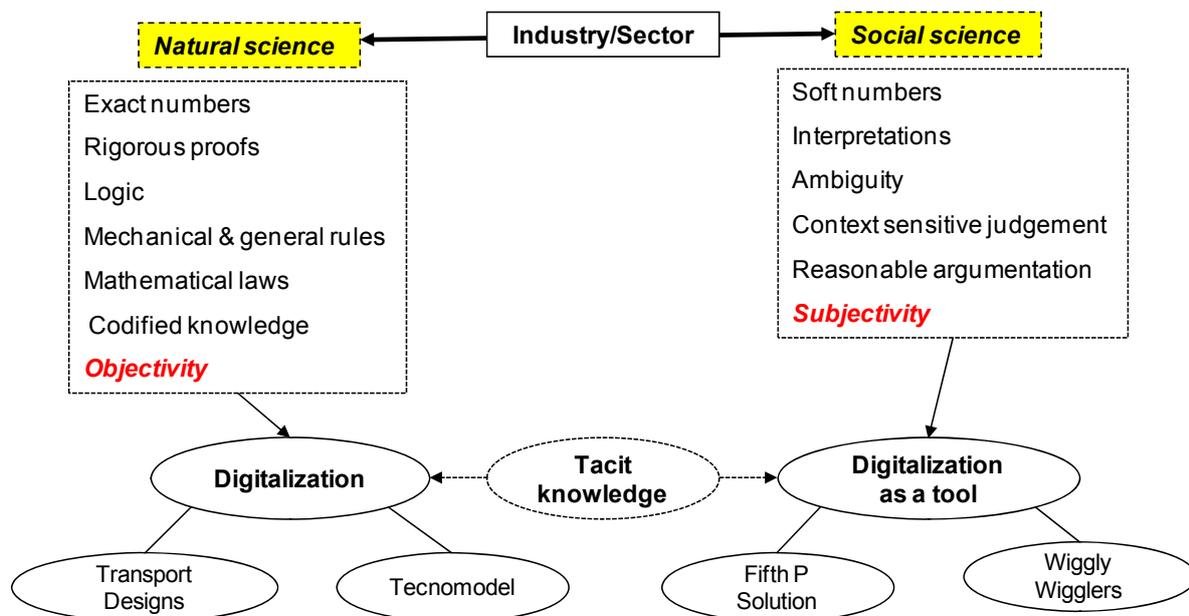


Figure 4: Digital Differences

What all the firms do have in common is an absolute focus on customer attention in all they do, particularly in marketing and customer related activities. Consequently, in this process of connecting the resources of the firm – including converting the mindset of the entrepreneur to a collective *winning mindset* of the firm – the tacit knowledge of the entrepreneur and his team seems to play an important role. This is an intangible factor (maybe reflected in a vision, an unspoken mission statement - some kind of unwritten strategic plan), that helps bringing the winning formula or *winning mindset* together in practical management actions and routines, frequently digitalized. Independent on the level of digitalization, it is this tacit, dynamic and renewable knowledge component which ultimately appears to convert the national winners into winners in the marketplace (Teece, Pisano and Shuen 1997; Teece 1998).

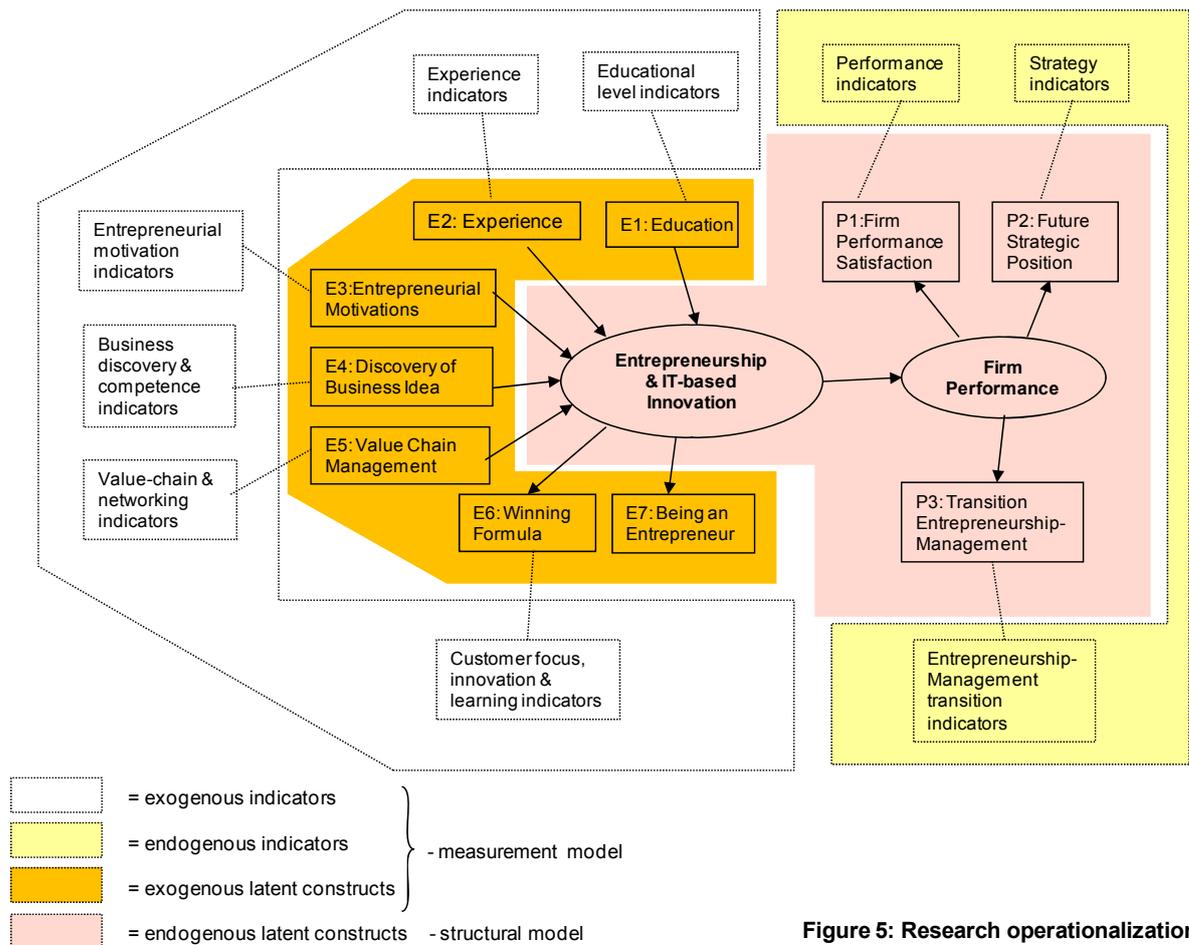
Quantitative analysis

Measurement instrument, model specification and results

Simultaneously with the literature review and deduction of the conceptual model, the research was operationalized by identifying measurement indicators for each main construct in the literature. In addition to substantive theoretical support, support was also sought based on practical management experience and a fair proportion of common sense. It should be emphasized, however, that a similar measurement instrument on the same theme as this research was not found in the literature and that the presented conceptual model thus is exploratory. The indicators of the measurement model and their link to the main constructs are illustrated in Figure 5, while the conceptual model's latent constructs and measurement indicators are summarized in Table 1.

With reference to Figure 5, it should be noted that constructs E1-E5 are deduced to be formative, i.e. as causing the latent entrepreneurship and innovation construct (entritin), while the models other constructs are reflective variables, i.e. with a causal relationship going from the latent constructs (entritin or frmprf) to the observed variables and indicators (Bollen 1989; Bagozzi 1994; Edwards and Bagozzi 2000). With reference to the conceptual model's proposition of causal relationships, it is for sake of good order emphasized that this theoretical proposition, usually is expected to go beyond explaining why variables are correlated or not and include theorizing about causal relationships among the variables. Nevertheless, in isolation, correlation or covariance is only a necessary, but not sufficient condition for causal relations and thus finding an expected pattern of correlations would not imply that the underlying theory is right only that it is plausible (Kelloway 1998).

In particular, it should be noted that in line with the literature and based on experience, it was reasoned that the indicator based on the direct question of the perceived "Importance of being an entrepreneur?" may be considered to represent the latent entrepreneurship and innovation construct (entritin). This representation of the latent construct should help making the subsequent interpretation of the findings easier.



In accordance with the literature (Diamantopoulos and Winklhofer 2001; Diamantopoulos and Siquaw 2002), composite measure indices were developed with the object of explaining abstract (unobserved) variances, considering multicollinearity among the indicators and emphasizing the role of indicators as predictor rather than predicted variables. The collected data representing each main construct were consequently converted to factor scores⁴ thus transforming sets of indicators into one variable per main construct representing items that have high loadings on one factor (Hair *et al.* 1998) and maximum reliability for the construct. This was done for each main construct with more than one indicator. It should be noted that each indicator represents a question in the questionnaire (Appendix 2). With reference to the measurement indicators (Table 1), the first column refers to the variable name used in Figure 5. The exogenous and endogenous indicators are measured using a Likert-scale with scoring 1-5 with labels adapted for the different question-types. The second column refers to the non-observed latent constructs of the conceptual model, the third column lists the observed indicators as reflected in the questionnaire, the fourth column indicates indicators (questionnaire items) per construct and column 5 the measurement reliability. The Cronbach's alpha for the constructs with several measurement indicators is within or above the 0,60-0,70 range indicating an acceptable to good reliability. For the four constructs with only one indicator, however,

⁴ Factor scores are standardized with a mean of 0 and standard deviation of 1

Construct name	Latent construct	Indicators	Indicator/Construct	Cronbach's α
Edu	E1: Education	48 Educational level	1	n/a
Exp	E2: Experience	8 Similar business experience	1	n/a
Entrmot	E3: Entrepreneurial motivation	27 Being in control 28 Being my own boss 29 Financial success 30 Recognition 31 Creating something new 32 "The thrill of the chase" 33 See something through to implementation	7	0,726
Discidea	E4: Discovery of the business idea	11 Internal innovation	1	n/a
Valcman	E5: Value chain management	20 Personal relationships 21 IT-based infrastructure/infosharing 22 Networking 23 Value-chain collaboration 24 Networking for learning 25 Networking with innovative "people"	6	0,787
Wform	E6: Winning formula/firm ambience	1 Customer focus 2 Time for creative efforts 3 Cross-functional teams 4 Learning by trial & error 5 Effective leadership 6 Innovative ambience 7 Diversity of ideas 26 Internal focus on continued learning	8	0,662
Beinge	E7: Being an entrepreneur	34 Being an entrepreneur	1	n/a
Perfsat	P1: Firm performance satisfaction	39 Overall performance 40 Growth 41 International expansion 42 Market share 43 Profitability 44 Development of new prod/services	6	0,784
Futstrat	P2: Future strategic position	15 Weakening competitive advantage 16 Weakening economy/demand 17 Growth-management challenges 18 Difficulties with continued innovation	4	0,624
Transem	P3: Transition entrepreneurship-management	19 Transition entrepreneurship-management 35 Adm.routines repetitive & boring	2	0,716

Table 1: Measurement Instrument

there are no reliability indicators. The indicators are, however, in spite of the danger of measurement errors, deemed critical in the research and maintained as part of the model based on support in substantive theory.

The empirical data were collected using a web-based survey instrument⁵ (Appendix 2). A sample of 41 observations was obtained based on a response rate of 51% from a convenience sample consisting of the national finalists of Dell's Small Business Excellence Award 2008. Descriptive statistics of the data collected are included in Appendix A-1, while a basic normality-check of the data is illustrated in Appendix A-2. The main conclusion from the data characteristics analysis is that individual constructs in fact do deviate from the normality assumption⁶, however, the literature generally supports that structural equation model's maximum likelihood theory is reasonably robust (Satorra 1992; Boomsma and Hoogland 2001) in spite of deviations. The deviation from normality combined with the small sample size will, however, nevertheless reduce the quality of the estimations.

The conceptual model was specified in LISREL to estimate to which extent the correlation matrix (of the main constructs) implied by the theory-based conceptual model corresponds to the correlation matrix of the empirical data of the sample. The result of the LISREL-estimation is illustrated in the path-diagram shown in Figure 6.

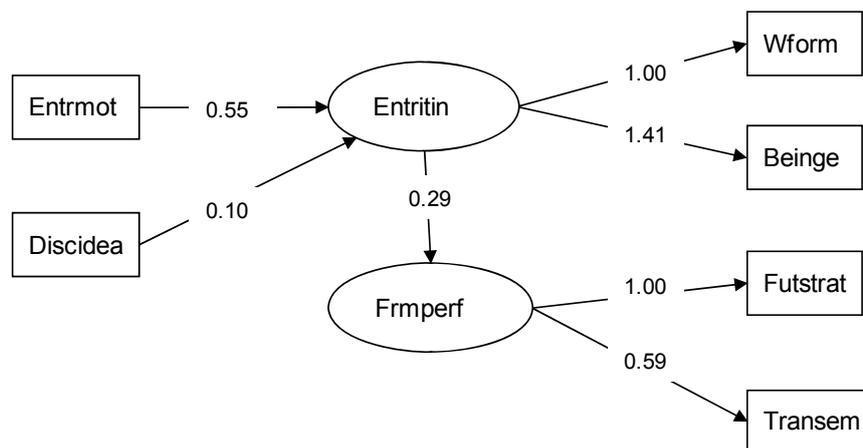


Figure 6

The model was run using the correlation matrix of the conceptual model's main constructs as input-data and with the measurement errors (Cronbach's alphas) inserted on the diagonal of the input correlation matrix to correct the estimates for measurement error. The model estimation is based on maximum likelihood and the standardized estimates of the loadings on each path are indicated. While correcting for measurement error where possible, it should, however, again be drawn attention to the fact that as many as 4 of the conceptual model's construct had only one indicator and thus no correction for errors in the measurement. As a consequence of this, no further comments on the model's fit will be made and the results of Figure 6 used only on an indicative basis with interpretations grounded on substantive theory in the further context of this exploratory research. With

⁵ The software "Survey Monkey" was used to collect the data

⁶ Structural equation modeling is based on the assumptions of basic data-linearity, approximate normal distribution, independent observations and random sampling

this caveat, however, it can be seen that the results indicate a rather strong causal effect parameter (0.55) from the entrepreneurial motivation (Entrmot) construct to the latent entrepreneurship IT and innovation (Entritin) construct. The results also indicate a much weaker causal effect parameter (0.10) from the discovery of the business idea construct to the entrepreneurship IT and innovation (Entritin) construct. Further a medium strong causal effect parameter (0.29) is indicated between the entrepreneurship IT and innovation (Entritin) construct and the firm performance (Frmperf) construct. I.e. this exploratory study, with its stated measurement weaknesses, nevertheless and in line with other studies (Dibrell, Davis and Craig 2008) seems nevertheless to indicate a *positive causal relationship between the entrepreneurship and IT-based innovation construct and firm performance*. The results also seem to indicate that the conceptual model's estimation of the reflective constructs winning formula (Wform) and being an entrepreneur (Beinge) in fact are caused by the latent entrepreneurship IT and innovation (Entritin) construct.

In an attempt to get an increased understanding of the interpretation of the LISREL estimation, a closer look was taken at the correlation between the main constructs of the conceptual model. For simplicity, the analysis of the correlations is limited to significant correlations and to make the interpretation of the findings easier, focus is directed towards the proportion of variance (r^2) obtained by squaring the correlation coefficient. "Using r^2 often aids interpretation as it shows the proportion of variance in one variable explained by the other; however, it tells us nothing about the direction of the relationship" (Diamantopoulos and Schlegelmilch 1997). Nevertheless, the r^2 is helpful by indicating the %-change in the variation of one variable in correlation with the variation in the other. The proportion of variance of the significant main constructs is illustrated in Table 2.

		Proportion of variance (r^2)			
		E3: Entrepreneurial motivation	E4: Discovery of the business idea	E5: Value chain management	P2: Future strategic position
Constructs	n	41	41	41	41
E4: Discovery of the business idea		0,165			
E5: Value chain management		0,342	0,222		
E6: Winning formula		0,182		0,188	
E7: Being an entrepreneur		0,394	0,171	0,260	
P3: Transition entrepreneurship-management					0,219

Note: Only correlations significant at the 0.01 level (2-tailed) included

Table 2

Based on support in substantive theory, the following main causal relationships between the composite scores of the constructs are interpreted based on the proportion of variance and considered as an extension of the preceding LISREL-analysis. The interpretations are made with reference to the theory-based conceptual model (Figure 5):

1. Keeping in mind that E7 (Being an entrepreneur) may be seen to indirectly represent the latent entrepreneurship and IT-based innovation construct (Entritin), a strong (causal) relationship (39%) from E3 (Entrepreneurial motivation) to E7 (Being an entrepreneur) is found. Thus strong entrepreneurial motivation positively influences entrepreneurship and IT-based innovation. This is also in line with the LISREL-findings.
2. A strong relationship is found between E3 (Entrepreneurial motivation) and E5 (Value chain management) (34%). This may be seen to be in line with both theory and practice, as effective networking and value chain relations will be an implicit process in the entrepreneurial development of the firm. Also based logic and experience it may be argued that the main causal influence goes from E3 to E5 at least during the start-up phase of the venture.
3. A relatively strong relationship (26%) is found between E7 (Being an entrepreneur), representing the the latent entrepreneurship and IT-based innovation construct (Entritin), and E5 (Value chain management) again indicating the importance of value chain management and networking in the entrepreneurship and IT-based innovation process.
4. A relationship (22%) is also seen between E5 (Value chain management) and E4 (Discovery of the business idea). In this case, however, the causal direction is more complex to interpret (and thus not included in the conceptual model). Causality in both directions may argued as the entrepreneur may in fact discover the business idea being member of a value chain or a network or, opposite, may seek support or growth via value chain collaboration and networking.
5. Similarly, the possible causal relationship (23%) between P2 (Future strategic position) and P3 (Transition from entrepreneurship to management) is hard to interpret. It is, however, not unlikely that a growing entrepreneurial firm may encounter complexity in the transition from entrepreneurship to management and in particular managing in direction of solidifying the firm's future strategic position. This may be linked to the need for new management skills, increasing organizational complexity during growth or challenges related to maintaining the innovative process.

Conclusions

Based on a comparison of the qualitative findings of the case studies and the quantitative analysis and interpretation of the data collected by help of the questionnaire, some main conclusions may be drawn. First and foremost, the triangulation supports the notion that the personal motivations of the founder or the founding team are crucial for entrepreneurship and IT-based innovation in small firms. Secondly, the founders' individual skills and capabilities appear as fundamental for innovative actions and creativity, including skills in discovering the business idea and converting the business idea into a commercially

valid proposition through simultaneous and sequential innovative actions. From a cognitive perspective, the entrepreneurs show a great capability to “[...] behave thinkingly” (Weick 1984, p. 222) and adapt to the turbulence and dynamism of the day-to-day operation as the market fluctuate. Thirdly, prior work experience also appears as a fundamental prerequisite for entrepreneurial startups in that all of the national winners had prior work experience and several from the same business sector in which they later made their entrepreneurial debut. Thus work experience is of preeminent formative importance. Forth, a central ingredient in what herein has been categorized as the “winning formula” is, in addition to customer focus and an innovative ambience, value chain collaboration and networking. Successful value chain and networking processes appear to be very closely related to the founding entrepreneurs’ personal social entrepreneurial skills – i.e. skills in dialoguing, motivating and in short dealing with the people-aspects of managing innovation.

Finally, as in most entrepreneurial stories, the personal efforts and personal sacrifices of the entrepreneur should not be underestimated. And neither should the help of “angels”, a touch of good luck and least, but not least, a good portion of passion for what you are and what you are doing.

Implications and recommendations for future research

The main implication of this exploratory study is the visualization of how significant IT-tools are in the innovative process of small firms. With the exception of possibly one or two firms (Unkasoft and Tecnomodel) all of the firms started off on their entrepreneurial voyage without a vision of how IT later on should convert itself into a main competitive resource. Later, as their individual business strategies matured and developed was IT “rediscovered” by the entrepreneurs as resource for reengineering their business processes and as a major tool in their competitive strategy.

Also worth emphasizing is the observation that the degree of digitalization of the individual firms in fact is limited by the firms’ industrial boundaries. Thus each small firm, depending on their embeddedness, internal processes and interactions with their value chains must be conscious of how far the impact of digitalization may go in direction of improving their production, service or customer attention. Degree of digitalization may thus be seen as context-dependent.

One of Dibrell, Davis and Craig’s (2008, p. 213) conclusions is “... that an SME that is able to understand the power of IT and to link this power to support the core competencies of the firm successfully can have a competitive advantage”. Thus while IT may improve performance through technical- or managerial innovations in data processing, the advantage may, however, be temporary unless the IT-advantage is not easily inimitable. In line with the resource-based view (Barney 1991), the firms will depend on a continuous innovative process to stay abreast of the competition as temporary monopolies hardly exist. Some of the key challenges for the future of entrepreneurial IT-based small firms are in

summary form illustrated in Figure 7. It appears that the key to future success may be closely related to how the entrepreneurs and their teams manage to maintain the innovative climate of the firm. Continued innovation combined with a conscious management of the firms' overall resources, represents the great challenge for the future of

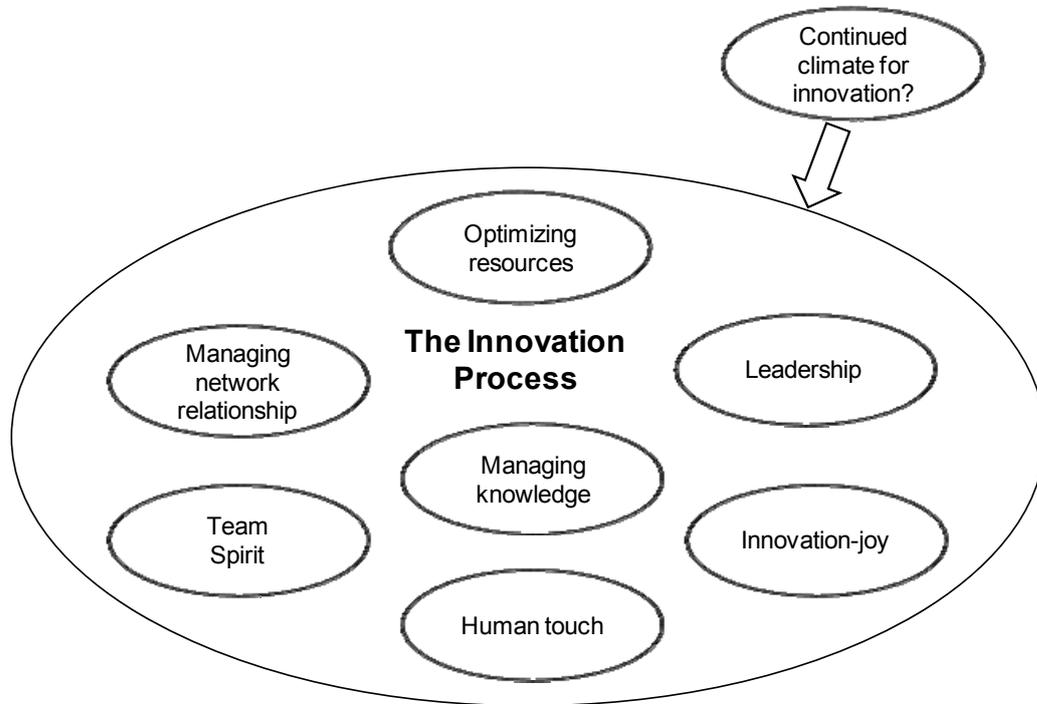


Figure 7: Continued innovation

the companies.

This exploratory study has several noted weaknesses. Among them, from a qualitative perspective, is the difficulty of capturing managerial- or technical processes within the firms through in-depth interviews. It is likely that this objective can only be achieved through extensive observations within the firms for instance through action research. Along this line, the collection and quality of the data would further improve based on more interviews at different levels and with personnel at different disciplinary functions within each of the firms.

In future research, also the quantitative part of the research should improve on several fronts. Based on the experience of this study, it is clear that the quality of the measurement instrument (the questionnaire) can be improved. In addition, the fundamental weakness of a small non-random sample limits the value of a quantitative approach and should be given due consideration in future research efforts.

References:

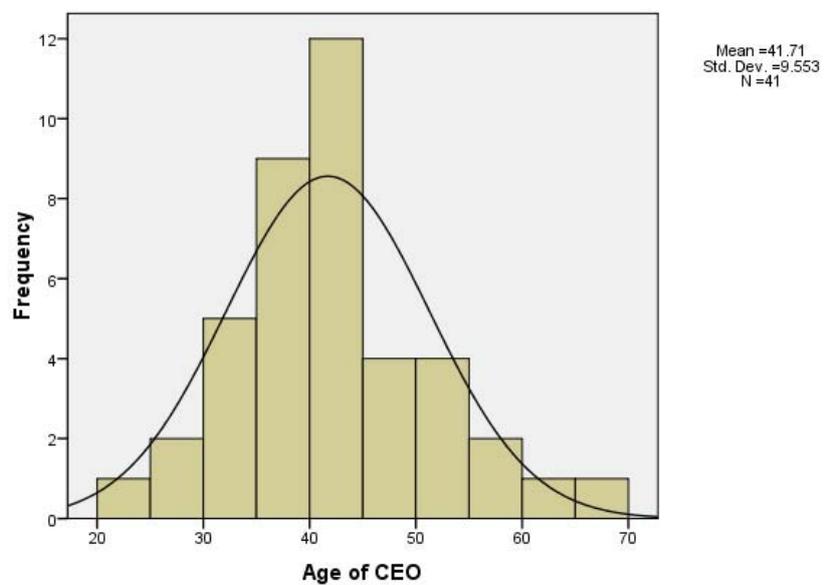
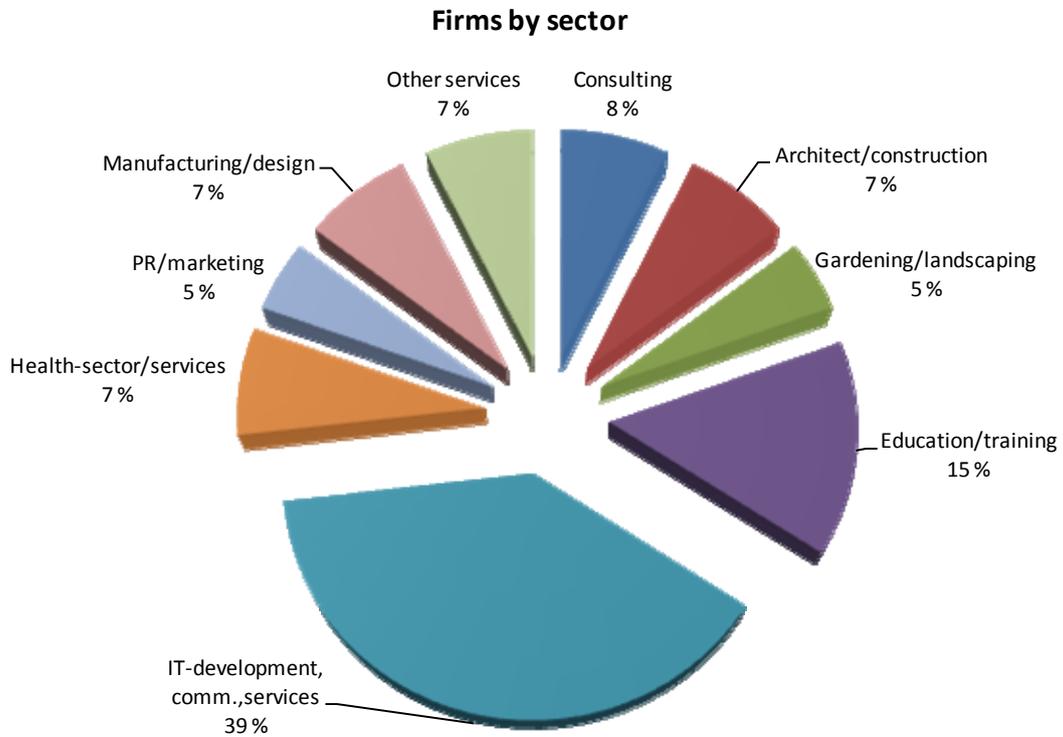
- Argyris, C. and Schön, D.A. (1996) *Organizational Learning II, Theory, Method, and Practice*, Addison-Wesley Publishing Company USA
- Bagozzi, R.P. (1994) *Structural Equation Models in Marketing Research: Basic Principles*, In Principles of Marketing Research, R. Bagozzi, ed. Oxford: Blackwell, pp. 317-385
- Barney, J.B. (1991) *Firm Resources and Sustained Competitive Advantage*, Journal of Management Mar 1991, Vol. 17, Issue 1, pp. 99-120.
- BarNir, A. and Smith, K.A. *Interfirm Alliances in the Small Business: The Role of Social Networks*, Journal of Small Business Management 2002 40(3), pp. 219-232
- Baron, R.A. (2004) *The cognitive perspective: a valuable tool for answering entrepreneurship's basic "why" questions*, Journal of Business Venturing 19, pp. 221-239
- Baron, R.A. and Ensley, M.D. (2006) *Opportunity Recognition as the Detection of Meaningful Patterns: Evidence from Comparison of Novice and Experienced Entrepreneurs*, Management Science Vol. 52, No. 9, pp.1331-1344
- Birkinshaw, J. and Gibson, C. (2004) *Building Ambidexterity Into an Organization*, MIT Sloan Management Review, Vol. 45, No.4, pp. 47-55
- Bollen, K.A. (1989) *Structural Equations with Latent Variables*, John Wiley & Sons
- Boomsma, A. and Hoogland, J.J. (2001) *The Robustness of LISREL Modeling Revisited*, Structural Equation Modeling: Present Future, 2001 - ppsw.rug.nl, article located on the www spring 2006
- Busenitz, L.W. and Barney, J.B. (1997) *Differences between entrepreneurs and managers in large organizations: Biases and heuristics in strategic decision-making*, Journal of Business Venturing 12, pp. 9-30
- Chandler, G.N. and Lyon, D.W. (2001) *Issues of Research Design and Construct Measurement in Entrepreneurship Research: The Past Decade*, Entrepreneurial Theory & Practice Summer, pp. 101-113
- Dess, G.G. and Robinson, R.B. (1984) *Measuring Organizational Performance in the Absence of Objective Measures: The Case of Privately-Held Firm and Conglomerate Business Unit*, Strategic Management Journal 5, pp. 265-273
- Diamantopoulos, A. and Schlegelmilch, B.B. (1997) *Taking the Fear Out of Data Analysis*, Harcourt Brace & Company Limited
- Diamantopoulos, A. and Siguaw, J.A. (2002) *Formative vs. Reflective Indicators in Measure Development: Does the Choice of Indicators Matter?*, Working Paper - Cornell Hotel School - 05.21.2002
- Diamantopoulos, A. and Winklhofer, H.M. (2001) *Index Construction with Formative Indicators: An Alternative to Scale Development*, Journal of Marketing Research Vol. XXXVIII, May 2001, pp. 269-277
- Dibrell, C., Davis, P.S. and Craig, J. (2008) *Fueling Innovation through Information Technology in SMEs*, Journal of Small Business Management Vol. 46, No. 2, pp.203-218
- Duncan, R.B. (1976) "The ambidextrous organization: designing dual structures for innovation", The management of organization, Killman R.H., Pondy L.R. and Slevin D. (eds.), North-Holland, New York

- Dutz, M.A., Ordovery, J.A. and Willig, R.D. (2000) *Entrepreneurship, access policy and economic development: Lessons from industrial organization*, European Economic Review Vol. 44 , pp. 739-747.
- Edwards, J.R. and Bagozzi, R.P. (2000) *On the Nature and Direction of Relationships Between Constructs and Measures*, Psychological Methods 2000, Vol. 5, No. 2, pp. 155-174
- Greve Arent (1995) *Networks and entrepreneurship-an analysis of social relations, occupational background, and use of contacts during the establishment process*, Scandinavian Journal of Management 11, No. 1, pp. 1-24
- Hair, J.F., Anderson, R.E., Tatham, R.L. and Black, W.C. (1998) *Multivariate Data Analysis*, Prentice-Hall Inc.
- Haynie, M.J., Shepherd, D., Mosakowski, E. and Earley, C.P. (2008) *A situated metacognitive model of the entrepreneurial mindset*, Journal of Business Venturing doi: 10.1016/j.jbusvent.2008.10.001
- Heunks, F.J. (1996) *Innovation, Creativity and Success*, Small Business Economics 10: pp. 263-272
- Johannessen, J.-A., Olaisen, J. and Olsen, B. (1999) *Strategic use of information technology for increased innovation and performance*, Information Management & Computer Security 7/1, pp. 5-22
- Kanter, R.M. (2000) *When Thousand Flowers Bloom: Structural, Collective, and Social Conditions for Innovation in Organization*, Chapter 8 in "Entrepreneurship - the Social Science View", Oxford Management Readers (ed. Richard Swedberg)
- Kelloway, K. (1998) *Using LISREL for Structural Equation Modeling - A Researcher's Guide*, Sage Publications, Inc.
- Kotey, B. and Meredith, G.G. (1997) *Relationships among Owner/Manager Personal Values, Business Strategies, and Enterprise Performance*, Journal of Small Business Management 35 (2): pp. 37-64
- Krueger, N.F.Jr. (2003) *The Cognitive Psychology of Entrepreneurship*, Chapter 6 in Z.J. Acs and D.B. Audretsch (eds.), Handbook of Entrepreneurial Research, pp. 105-140
- Mitchell, R.K., Busenitz, L.W., Bird, B., Gaglio, C.M., McMullen, J.S., Morse, E.A. and Smith, B.J. (2007) *The Central Question in Entrepreneurial Cognition Research 2007*, Entrepreneurship Theory and Practice January, 2007, pp 1-27.
- Nonaka, I. and Takeuchi, H. (1995) *The knowledge-creating company* , Oxford University Press
- Peteraf, M. and Shanley, M. (1997) *Getting to know you: a theory of strategic group identity*, Strategic Management Journal 18, pp. 165-186.
- Peterman, N.E. and Kennedy, J. (2003) *Enterprise Education: Influencing Students` Perception of Entrepreneurship*, Entrepreneurship Theory and Practice Winter, 2003, pp. 129-144.
- Reitan, B. (1997) *Where do we learn that entrepreneurship is feasible, desirable and profitable?*, Paper presented at ICSB World Conference, San Francisco, June 1997
- Sadler-Smith, E., Hampson, Y., Chaston, I. and Badger, B. (2003) *Managerial Behavior, Entrepreneurial Style, and Small Firm Performance*, Journal of Small Business Management 41 (1), pp. 47-67
- Satorra, A. (1992) *Asymptotic robust inferences in the analysis of mean and covariance structures*, Blackwell, in P.V. Marsden (Ed.) *Sociological Methodology*, pp. 249-278
- Scherer, R., Adams, J., Carley, S. and Wiebe, F. (1989) *Role model performance effects on development of entrepreneurship*, Entrepreneurship Theory and Practice 13 (3), pp. 53-72

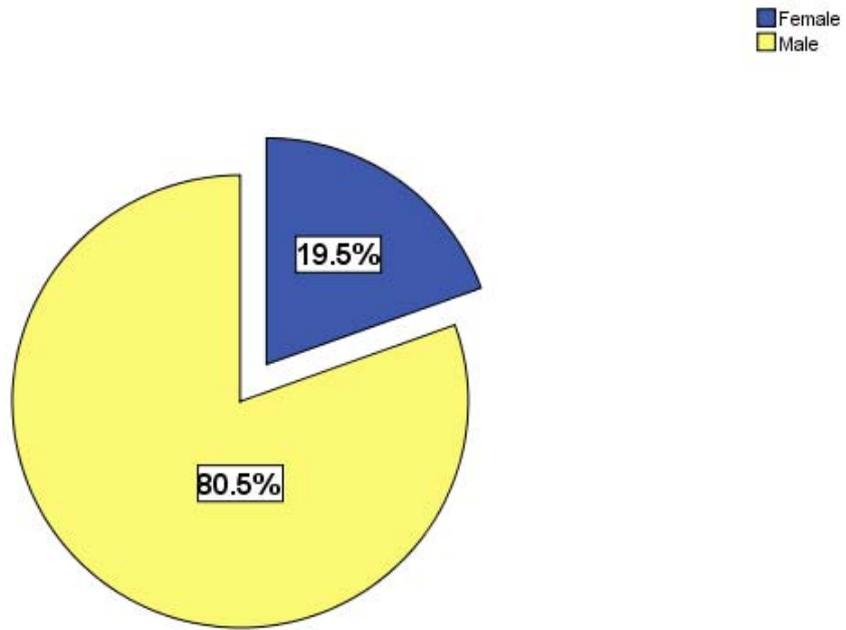
- Schumpeter, J. (1911) *Theorie der wirtschaftlichen Entwicklung*, Translation in the American Journal of Economics and Sociology Vol. 61, No. 2 (April, 2002)
- Senge, P.M. (1990) *The Fifth Discipline The Art & Practice of The Learning Organization*, Random House Business Books UK
- Shane, S. and Eckhardt, J. (2003) *The Individual-Opportunity Nexus*, Chapter 8 in Z.J. Acs and D.B. Audretsch (eds.), *Handbook of Entrepreneurial Research*, pp. 161-191
- Shuman, J.C. and Seeger, J.A. (1986) *The Theory and Practice of Strategic Management in Smaller Rapid Growth Firms*, American Journal of Small Business 11, pp. 7-18.
- Steensma, K.H., Marino, L., Weaver, K.M. and Dickson, P.H. (2000) *The Influence on National Culture on the Formation of Technology Alliances by Entrepreneurial Firms*, Academy of Management Journal Vol. 43
- Teece, D.J. *Capturing Value from Knowledge Assets: The New Economy, Markets for Know-How, and Intangible Assets*, California Management Review Vol. 40, No. 3, Spring 1998
- Teece, D.J., Pisano, G. and Shuen, A. (1997) *Dynamic Capabilities and Strategic Management*, Strategic Management Journal Vol. 18:7, pp. 509-533.
- Tidd, J., Bessant, J. and Pavitt, K. (1997) *Managing innovation, Integrating technological, market and organizational change*,
- Vaivio, J. (2004) *Mobilizing Local Knowledge with "Provocative" Non-financial Measures*, European Accounting Review Vol. 13, No. 1, 39-71, 2004
- Weick, K.E. (1984) *Managerial Thought in the Context of Action* , In: S. Srivastava (ed.), *The Executive Mind*, pp. 221-242. Jossey-Bass, San Francisco, CA

APPENDIX 1

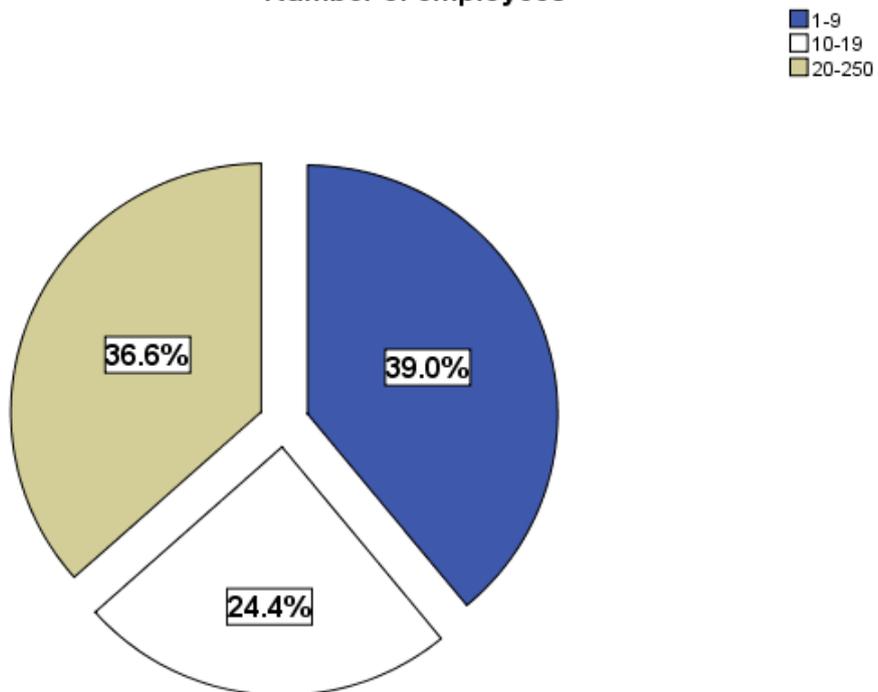
A-1 Descriptive statistics



Gender of CEO

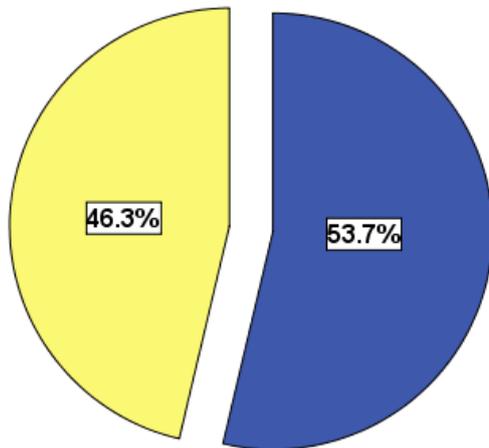


Number of employees



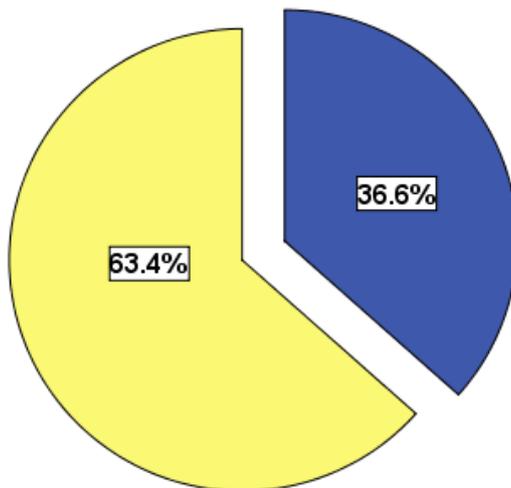
Sole owner of more than 50% of equity

■ Yes
■ No



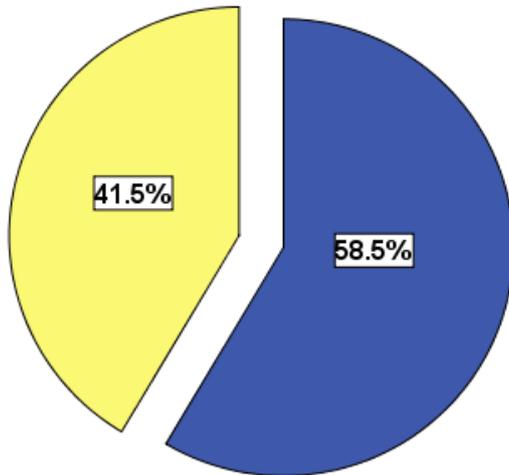
Started business alone

■ Alone
■ With others



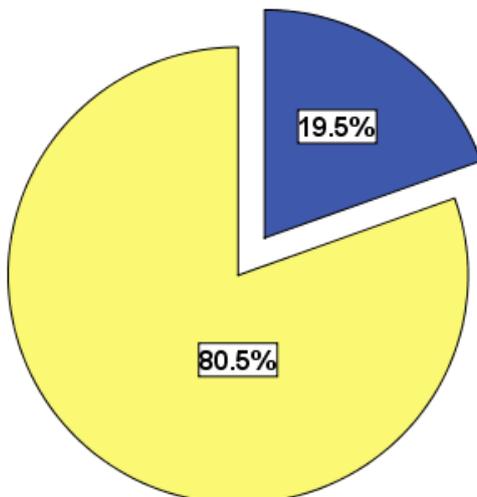
Either of parents owned business when growing up

■ Yes
■ No



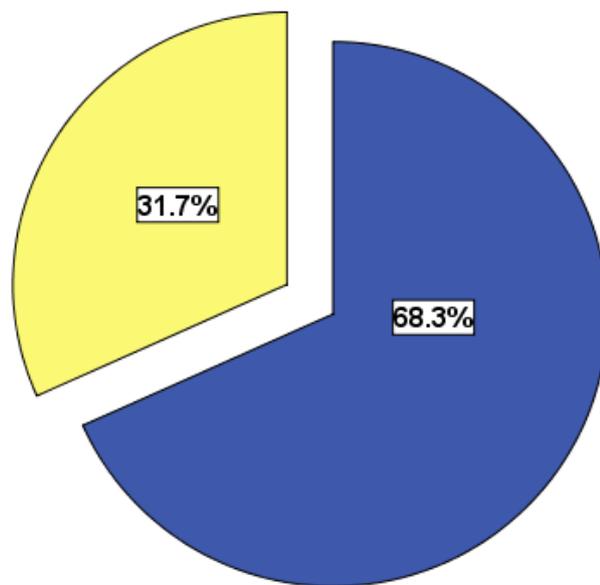
Present job is first full-time job

■ Yes
■ No



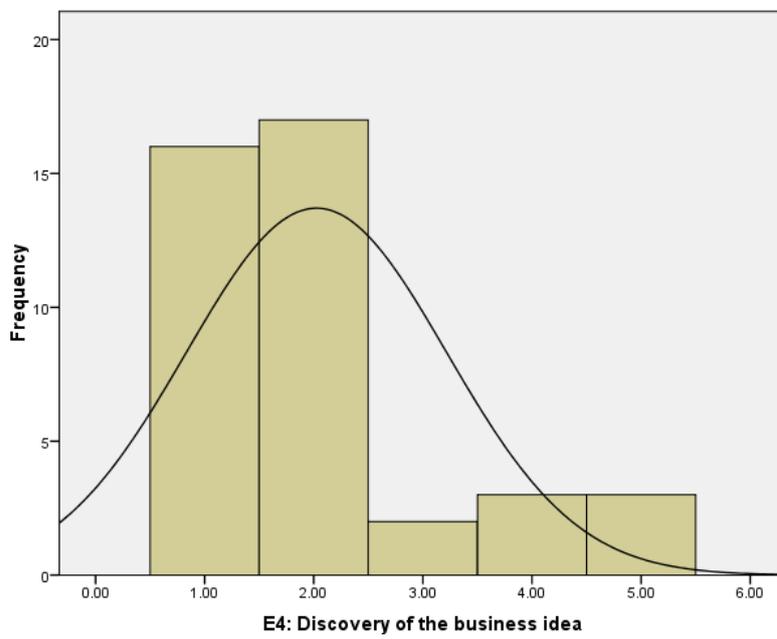
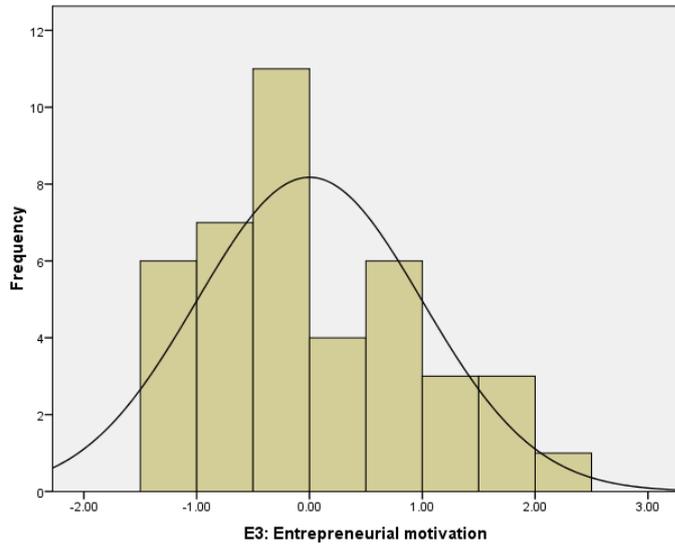
Strategic focus of the firm

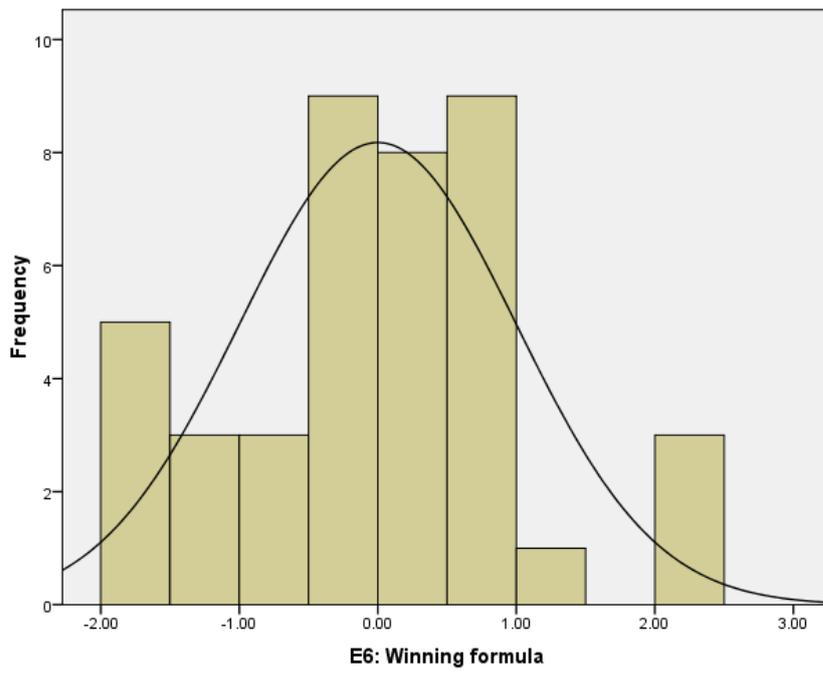
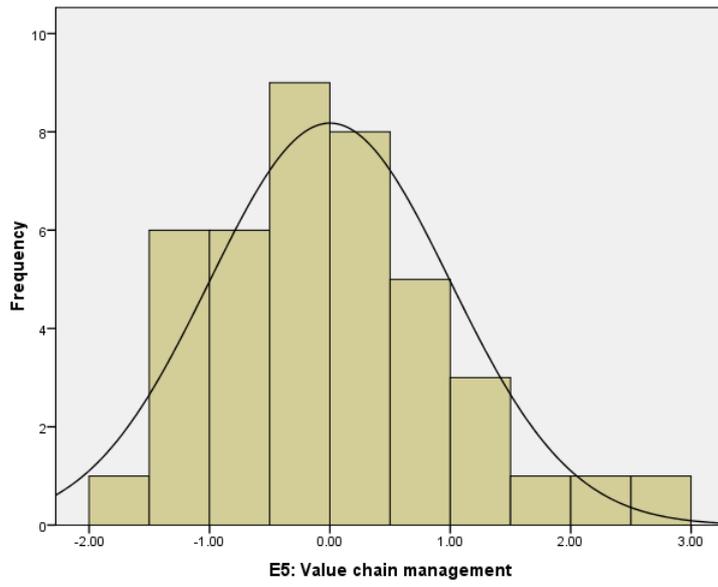
- A process of continued technological innovations (IT-based or other)
- Continued managerial improvements (marketing, sales, administration)

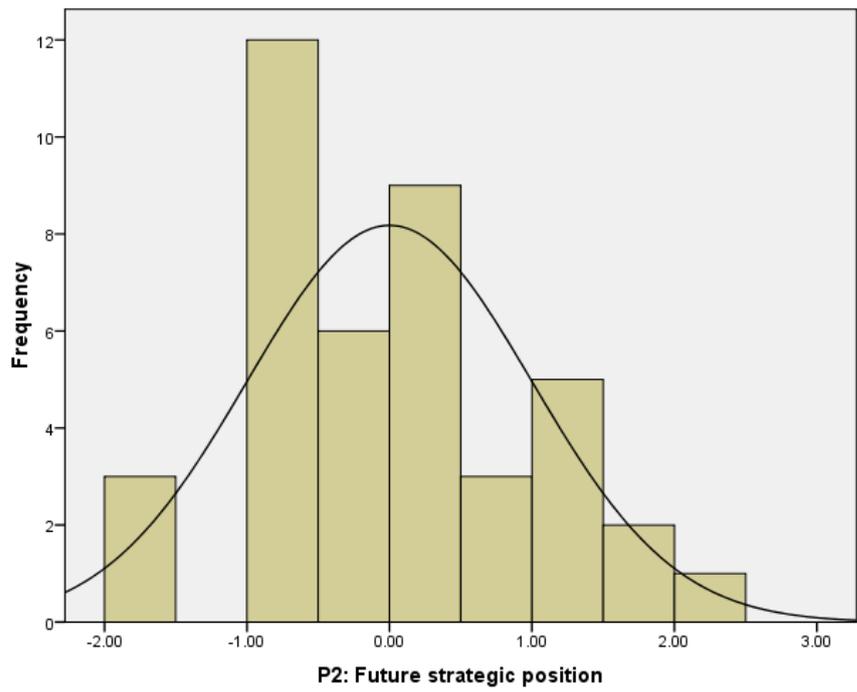
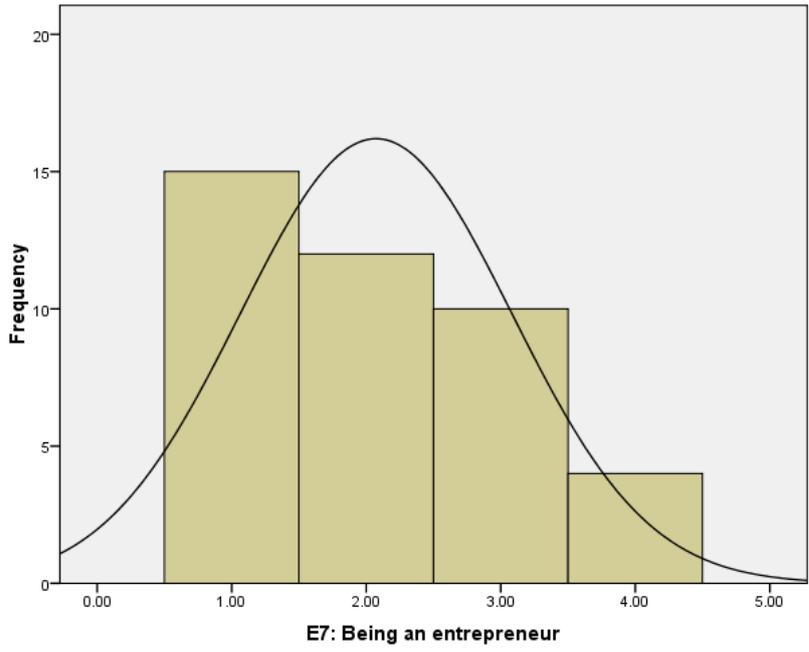


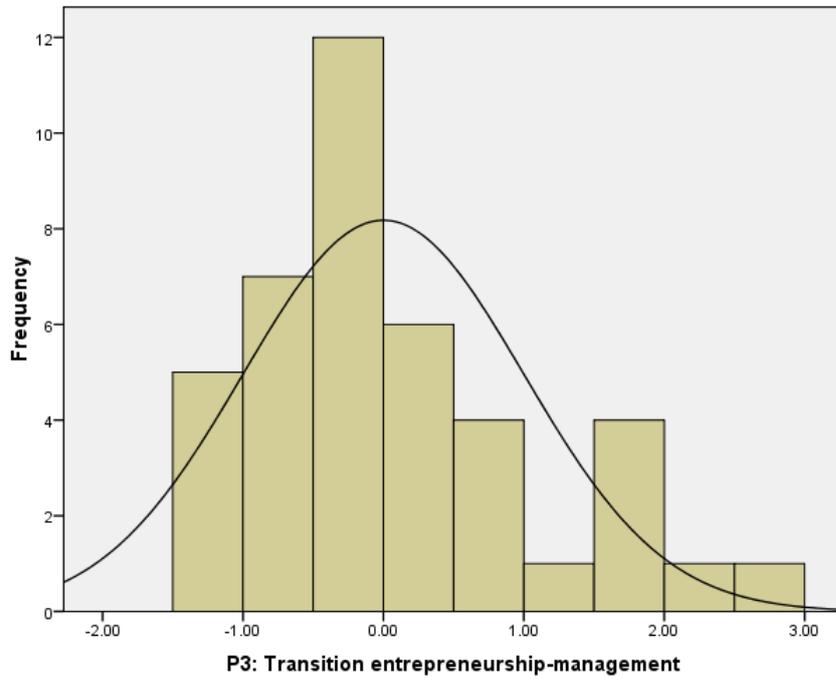
A2 - Test of normality

Test limited to significant main constructs (E3-E7 and P2-P3):









APPENDIX 2

ICSB2008Finalists

1. ICSB-DELL Research: Questionnaire

Your company was one of the finalists in the 2008 ICSB-Dell IT Excellence competition. To learn more about those organizations that made it into the final round of the competition we have developed a short questionnaire. The International Council for Small Business (ICSB) would greatly appreciate it if you would take a few minutes to complete this questionnaire. Your answers will be anonymous. What we learn as an aggregate will be shared with all those interested in increasing the effectiveness of information technology innovation and the success of entrepreneurial organizations. We will be selecting randomly a winner from the respondents to receive a one year membership to ICSB and a news article to be published on the ICSB web site profiling their firm. If you would like to be part of the raffle, please indicate your email address at the end of the survey.

I thank you personally for your willingness to participate and please do not hesitate to contact me if you have any questions at +1-202-468-3133 and or via email at aymanelt@icsb.org

Sincerely,

Dr. Ayman El Tarabishy
Executive Director for the International Council for Small Business (ICSB)

* 1. How important is each of the following to your organization's success?

	Extremely Important	Very Important	Somewhat Important	Slightly Important	Not Important
The customer is the focus of innovation	<input type="radio"/>				
Time is provided for creative efforts	<input type="radio"/>				
Cross-functional team-collaboration	<input type="radio"/>				
The freedom to progress through trial and error	<input type="radio"/>				
Effective leadership	<input type="radio"/>				
The environment of the firm encourages innovation	<input type="radio"/>				
Diversity of ideas are encouraged	<input type="radio"/>				

*** 2. To what extent do you agree or disagree with each of the following statements?**

	Agree Completely	Agree Mostly	Neither Agree nor Disagree	Disagree Mostly	Disagree Completely
When I started my organization, I already had experience in the same type of business.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I started my organization, I already had experience from starting other businesses.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The innovation, described in my Dell entry, is mainly a technical innovation (new design, new technical solution, etc.).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The business opportunity was a result of an innovation within our company	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The business opportunity emerged based on contacts with our network participants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The business opportunity is a result of special competence developed over time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*** 3. My organization's strategy is mainly based on (choose one):**

- A process of continued technological innovations (IT-based or other) Continued managerial improvements (marketing, sales, administration)

*** 4. I am concerned about:**

	Agree Completely	Agree Mostly	Neither Agree nor Disagree	Disagree Mostly	Disagree Completely
A gradual loss of competitive advantage due to increased competition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A weakening of the economy and decreased demand for our products/services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Difficulties of managing a growing firm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Difficulties of maintaining an innovative process within the firm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Difficulties of managing the transition from entrepreneurship to management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

ICSB2008Finalists

* 5. How important for business success is each of the following:

	Extremely Important	Very Important	Somewhat Important	Slightly Important	Not Important
Personal Relationships	<input type="radio"/>				
IT-based technological infrastructure for communications and information sharing	<input type="radio"/>				
Being a member of a network	<input type="radio"/>				
Network-collaboration with suppliers and clients	<input type="radio"/>				
Networking for learning and sharing best practices	<input type="radio"/>				
Taking advantage of opportunities to network with other innovative people	<input type="radio"/>				
A focus within the company on continued learning.	<input type="radio"/>				

* 6. How Important to you personally is each of the following:

	Extremely Important	Very Important	Somewhat Important	Slightly Important	Not Important
The feeling of being in control of my own projects	<input type="radio"/>				
Being my own boss	<input type="radio"/>				
Financial success	<input type="radio"/>				
Getting recognition for a job well done	<input type="radio"/>				
Being involved in creating something new	<input type="radio"/>				
Feeling the "thrill of the chase" of a new innovation (a new product or service)	<input type="radio"/>				
See something through from idea to implementation	<input type="radio"/>				
Being an entrepreneur	<input type="radio"/>				

* 7. To what extent do you agree or disagree with each of the following statements?

	Agree Completely	Agree Mostly	Neither Agree nor Disagree	Disagree Mostly	Disagree Completely
I find the administrative routines of management repetitive and boring.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I attempt to delegate detailed analytical decision-making.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I prefer to use my intuition and "gut feeling" to make decisions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The relationship between the founder(s) and other key-personnel has become more complex over time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

ICSB2008Finalists

*** 16. My present job is my first full-time job.**

Yes

No

*** 17. How long have you managed your current business?**

0-1

4-5

11+

2-3

6-10

*** 18. Which of the following best describes the type of work you did in your last job?**

General management

Production management

Technical (non-management)

Sales management

Research & development

*** 19. In your firm, does one person own more than 50% of the equity?**

Yes

No

*** 20. Did you start your present business alone or with others?**

Alone

With Others

*** 21. Briefly describe the product or service your company provides**

22. Please add any additional comments you may have to help us better understand your organization.

23. Please be assured all your responses will be anonymous.

If you would like to be included in our raffle, please provide your e-mail below. We will randomly select an email from this field to select a winner to be a member of ICSB for a complete year and to showcase their company on the ICSB website.

Social Entrepreneurship – a precursor to for-profit entrepreneurship in peripheral communities

Emer NÍ BHRÁDAIGH

Abstract

A longitudinal study using qualitative and quantitative data spanning more than one century, tracked the emergence and evolution of entrepreneurship in a historically disadvantaged, peripheral, rural, minority language area over 100 years. Rooted in the theoretical frameworks of corporate demography, organisation evolution, and entrepreneurship capital, social entrepreneurship (co-operatives & non-profits) was found to be important in developing the necessary entrepreneurship capital for private organisation building (rather than self-employed multiple income activity) entrepreneurship. While physical and human capitals were important, soft support-related social and psychological capitals were also key factors in the tourism, marine, and audio-visual sectors analysed.

Introduction

While enterprise development has come centre stage in terms of regional development, peripheral areas have often been developed primarily via inward / foreign direct investment, with indigenous entrepreneurship an afterthought. In rural areas incomers are often more entrepreneurially active than those born and reared in the area. While this pattern was largely well-known and documented in the chosen region, another factor uncovered during this longitudinal research project was the importance of public and social (in the sense of non-profit, or more than profit) entrepreneurship in kickstarting new industries which eventually attracted and/or fostered private entrepreneurship. This paper outlines how public and social entrepreneurship, in terms of strategic organisation-building, seems to have preceeded private for-profit entrepreneurship. The paper starts with a description of the focal area, the Irish County Galway Gaeltacht (Irish speaking area) and an overview of some Gaeltacht Studies research. This is followed by a review of the literatures of social entrepreneurship and entrepreneurship capital as well as a brief review of corporate demography and organisation evolution. Following a description of the research methods used, the results obtained in terms of quantitative and qualitative data are presented. The paper ends with a discussion of a number of conclusions as well as some implications for policy development.

Focal Region

The focal community is a peripheral rural community in Co Galway on the West coast of Ireland, where the Irish (Gaelic) language is the main community language. Related to other Celtic languages such as Breton, Scots Gaelic, and Welsh, the Irish language was the majority language up to the mid 19th century when there was a remarkable shift to English within two generations, with the Irish language declining drastically from more than three million to 700,000 speakers (Hindley, 1990; Ó Murchú, 1970; Ó Tuathaigh, 1990). With a scholarly tradition stretching back centuries and across Europe through the monks 18th century colleges in Continental European cities such as Louvain, Paris, Rome, and Salamanca, by the late 19th century the language had become primarily an oral language spoken mainly along the western seaboard, in poorer regions. The language was viewed as an impediment to economic and social advancement, the colonial English language the key to success. By the end of the 19th century all administrative structures were operated through the medium of English with Irish speakers ridiculed for using the language in villages, towns, and cities. The Celtic Revival of the late 19th and early 20th century led to a renewed interest in the language. The government of the new independent Free State, later to become the Republic of Ireland, embraced the language and established the Gaeltacht Commission which delivered its report in 1926 (Government of Ireland, 1926). Since then

the areas in which the language is the dominant community language have been afforded specific Gaeltacht status ('Irish speaking community / region') in order to preserve and promote the language. The Gaeltacht covers areas in seven counties, mainly along the western seaboard, the largest area being in Co Galway. In terms of industrial development and entrepreneurship development, the area is currently administered by Údarás na Gaeltachta (The Gaeltacht Authority), a state body with a democratically-elected board. From the the 1950s to 1970s Gaeltarra Éireann ('Gaelic Products of Ireland') served this function. Due to the area's peripherality and more so its particular disadvantage (very poor land, jagged coastline, weak infrastructure, overall lack of development), it was afforded particular developmental support from 1891 to the 1920s, by the Congested Districts Board, and by a series of Government departments from then to the 1950s.

The Galway Gaeltacht is the subject of this study. With a population of 42,000, it spans an area stretching 80km from the suburbs of Galway city westwards in South Connemara. It also includes the three Aran islands well-known to tourists. The area has the dubious honour of having been one of the poorest areas in the former Congested Districts and still has some of the pockets of the highest unemployment rates in the state. At present the main economic activities are marine resources, the audio-visual sector, some light manufacturing, and small modern clusters such as medical devices. A large percentage of people work in the public sector either in the area or in Galway city. Tourism is largely based on day trippers and short stay tourists on the Aran Islands and on language-based Irish colleges, similar to youth summer camps, with teenagers staying with local families and attending classes and other activities during the day. As the Irish language is the first official language of the state, and is a compulsory subject in the school curriculum, and is afforded particular protection in the Official Languages Act (2003), there are particular employment opportunities available to Gaeltacht Irish speakers in the public sector.

Gaeltacht Studies Research

Most of the research and intellectual writing on the Gaeltacht has been in the disciplines of socio-linguistics (language revival and preservation) (Denvir, 2002; Mac an Iomaire, 1983; Ó Giollagáin et al, 2007; Ó Tuathaigh, 1990); rural development (Ó Cinnéide Keane & Cawley, 1985); socio-economic development (Fennell, 1976; Johnson, 1993; Keane, Cawley & Ó Cinnéide, 1983; Kearns, 1974; Mac Aodha, 1971; Ó Conghaile, 1988); co-operative studies (Akutagawa, 1986; Breathnach, 1986; Johnson, 1979) and the impact of state aid and policy (Kenny, 1972; Commins, 1988; Ó Cinnéide & Keane, 1988). In summary there is general agreement on the following issues in this literature. From the turn of the 20th century, much of the impetus for the development of the Gaeltacht came from the urban-based middle classes and intelligentsia which voiced reservations about the detrimental effects of modernisation on the Irish language. Meanwhile the Gaeltacht people themselves continued to feel peripheral and disadvantaged; and continued to see emigration and the adoption of the English language as a means of advancement. They developed a dependency on state support. The state policy dating from the 1920s, of using the education system to initially create an Irish speaking nation and later at least a bilingual nation attracted many Gaeltacht school leavers out of the Gaeltacht and into the teaching profession (Johnson, 1992; Jones, 2006, Kelly, 2002) or into the public sector in general.

In terms of industrial or enterprise development, in the private sector and in the relevant state bodies, most of the managerial positions were held by non-Gaeltacht people based outside the Gaeltacht, and later by incomers to the Gaeltacht. The Gaeltacht Civil Rights movement in the 1960s was the first time Gaeltacht people organised themselves into a proper bottom-up 'collective effervescence'. This led to the establishment of the co-operative movement (long after elsewhere in the country) in the 1970s and the establishment of the local state-funded community radio station (Raidió na Gaeltachta) in 1973, and the eventual establishment of TG4 the Irish-medium television broadcaster in 1996. Gaeltarra Éireann initially set up in 1957 with headquarters in Dublin, to develop Gaeltacht state industries such as knitting and weaving transferred its headquarters to the Galway Gaeltacht in 1969). An eventual result of the Gaeltacht Civil Rights campaign was the replacement of

Gaeltarra Éireann with a democratically elected Gaeltacht Authority – Údarás na Gaeltachta with the responsibility for the economic, social, and cultural development of the region.

In conclusion much of the Gaeltacht business-related research addressed socio-economic development, industrialisation, and self-organisation in the second half of the 20th century; or was framed in the linguistic impact of these changes. None specifically addressed enterprise development and this author's work is the first such comprehensive study. It tracks the emergence and evolution of entrepreneurship in the area from the 1890s to date. This paper discusses the role of social entrepreneurship in that pattern of evolution.

Literature Review

This section is a review of some of the relevant social entrepreneurship literature as well as a review of the theoretical framework used in this study – namely longitudinal corporate demographic organisation evolution in conjunction with entrepreneurship capital.

Social Entrepreneurship – definitions and differences

Social entrepreneurship is a relatively new but growing domain within entrepreneurship research. Definitions abound but are in general agreement on addressing societal problems, and being about more than profit as distinct from the more established definitions of 'non-profit' or not-for-profit (Austin, Stevenson & Wei-Skillern, 2006; Nyssens, 2006; Perrini, 2006; Scottish Executive, 2007). This author's favoured definition of entrepreneurship is the encompassing generalist one suggested by Steyaert and Hjorth:

Entrepreneurship is a complex social-creative process that influences, multiplies, transforms, re-imagines and alters the outlook of the space in society in which it is at once grounded and contextualised. (2006, 2)

This definition embraces the concept of social entrepreneurship. In this research social entrepreneurship is operationalised as new enterprises established by the state or state bodies or state-funded public bodier, or those established by voluntary or community groups, including co-operatives. This It excludes enterprises established and owned by private individuals or groups of private individuals with a for-profit motive. This definition is largely in line with that used by Austin, Stevenson and Wei-Skillern (2006). It is more encompassing than the European Commission's definition of the social economy namely co-operatives, mutuals, associations and foundations (McManus, 2004).

One of the differences between for-profit and social entrepreneurship include the greater need for social entrepreneurs to marshal the necessary resources and skills (Austin, Stevenson & Wei-Skillern, 2006; Perrini, 2006), thus having to draw more heavily on weak ties in a larger network. 'Patient capital' is required as the return on investment may take a decade or a generation or even more (Marino, 2006) especially when deep-rooted social problems are being addressed. In less developed countries or communities, there may be a modest perception of the need for social services and most provided on an informal family basis. By contrast in well-developed welfare states, these services are provided by the state itself or by the non-profit sector leading to a higher social capital or higher number of organisations. In drawing on a wider range of resources, social enterprises need a supportive institutional environment which nurtures their development (Hulgård & Spear, 2006). However the problem with self-help social enterprises established by disadvantaged people is that the internal high bonding social capital and strong ties overshadow the low levels of bridging social capital with other groups – in other words networking outside of one's own community (Hulgård & Spear, 2006). These organisations can benefit from including 'outsiders' on their boards to ensure higher bridging social capital. Another differing characteristic of social enterprises is the over emphasis on the social mission of the organisation to the detriment of high performance, accountability or value for money (Austin, Stevenson & Wei-Skillern, 2006), and the difficulty in measuring 'social value' (Brooks, 2009). Underperforming social enterprises enjoy higher levels of forgiveness than market-based for-profit organisations. It is against this backdrop that the theoretical framework of longitudinal corporate demography organisational evolution and entrepreneurship capital are discussed.

Longitudinal Studies

Leading thinkers such as Durkheim (1912 [1971]) and Schumpeter (1943) have stated that change, such as creative destruction, takes time. In their work on corporate demography and organisation evolution, Carroll & Hannon (2000) and Aldrich & Ruef (2006) have also highlighted the benefits of tracing back to the origins of new beginnings. By taking a longitudinal view, one can gain different insights – especially at the macro level of a particular human community or region. No landscape is a tabula rasa; it has centuries and millennia of history. Similar to a physical landscape the entrepreneurial landscape might witness dramatic changes such as the building of an industrial estate, or a mushrooming of new audio-visual companies, but it also witnesses changes over longer periods of time – increases in education levels, changes in attitudes towards innovation. Much such cultural change requires more than generation or more. A factory can be built in a rural community but can the local population hitherto mainly involved in small-scale agriculture take on the senior management roles and strategically develop a new industry sector overnight? At micro level one can often explain why no new firm of a particular kind exists but explaining the dearth of entrepreneurship at a regional level requires this longer term view and understanding. Identifying the Pioneers, those initial innovative enterprises who kickstarted a new industry, and identifying patterns across different industries should better inform policy makers on how to kickstart further new industries. This can be done via the theoretical approaches of corporate demography and organisational evolution. At societal level the patterns uncovered can be analysed through the concept of entrepreneurship capital and its constituent capitals. These issues are now discussed.

Corporate Demography

Carroll and Hannon (2000) take organisational ecology and demographics as their base in looking at the 'flow of corporate vital events over time and their interrelationships' (2000, 39). Demographic analysis is perhaps most insightful when conducted at a number of different levels from the individual firm up to the collective, and by comparisons between the levels. While we can see the number of new firms established in any given year, the overall macro patterns might provide more insight. While one new fish farm is interesting, the birth and evolution of the fish farming sector takes time, perhaps a few decades. Tracing back to that original fish farm, how it developed, how (or whether) it was fostered, what setbacks it encountered, how it was the catalyst for a whole new industry or business model could give insights into how new industries may be planned, born, or kickstarted. Numerous studies have looked at Populations of organisations – that is, particular industries or business models (co-operatives; trade unions) (Aldrich et al, 1990; Delacroix & Carroll, 1983; Freeman, 1990; Hannan et al, 1990, Singh, 1990) and there is a need for more Community level research. Baum and Singh (1994) also suggest that in addition to the ecological approach one can examine the genealogical aspects. For example, a study the furniture industry in Co Monaghan, Ireland showed that 75 percent of respondent firms were in some way related to the largest and one of the oldest firms in the area (Mottiar & Jacobson, 2002).

Organisational Evolution

The key issues of interest to Aldrich and Ruef (2006) in their survey of a wide range of studies on organisational evolution are how new Populations emerge, how new variations of organisational forms emerge out of these Populations, and how the organisations are imprinted and legitimised by the environment at the time of emergence. Triggering events and the imprinting that happens at that stage can have life long impacts and lead to path dependency consequences (Stinchcombe, 1965). The form of the first fish farm or the first Irish college can become the accepted way business / ownership model. The environment at time of founding of individual firms or of a new Pioneer can imprint how that new Population evolves. The co-operatives initially established to provide water and other utility services for the local community can find it difficult to vary from that home community focus. The co-operative involved in many different activities can find it difficult to specialise in one area in

order to successfully grow. In Aldrich and Ruef's model (2006) these variations are what creates new forms of business perhaps spawning a new Population of businesses.

Emergence of New Populations

Working back from the current landscape of enterprises is about seeking out when and how did these new Populations of organisations emerge; what variations and selections occurred; why did the Populations evolve as they did; and what strategies did the individual firms in the Populations, the Population as a whole, and the Communities of Populations employ to develop and grow, to gain legitimacy within the environment in which they operated. This author has identified three interrelated issues related to this emergence of new Populations – namely a) the Pioneers who first emerge with the new form; b) the liability of newness they may have suffered, c) the imprinting they suffered via the contemporaneous forces and factors at time of establishment. The next section discusses these issues and the strategies the Population members employ in order to facilitate growth.

Pioneers

Pioneering entrepreneurs are those who lead the way in establishing new forms of enterprise (Aldrich & Ruef, 2006, 187). They are the true innovators and creative destructors, whose ideas and leadership are copied and / or modified by the 'early fledglings' and later by the rest. They often encounter disbelief; discouragement; and lack of understanding as they endeavour to marshal the resources required to realise their visions. They are on a steep learning curve in striving to gain socio-political and cognitive legitimacy. They spawn new Populations and as these new Populations emerge, variations in the organisational form occur, some intentionally through experimentation, or because of incentives to innovate, others through mistakes or general collective action in response to new situations. The more variation occurs the more opportunities for transformation there are. Due to various forces, some variations are eliminated, and others selected and retained as more suitable to the new environmental context and situation. These retained variations are then preserved and/or duplicated. They eventually struggle in contest for the limited resources available. By now a new Population has become embedded in the system.

Liability of Newness and Imprinting

The pioneering firms and the early fledglings in this new Population are affected by Stinchcombe's liability of newness (1965), in other words the difficulties faced by new organisations in their infancy compared to older organisations. As new industries or nascent entrepreneurs are particularly dependent on the surrounding environment in their efforts to marshal the required resources, they are particularly influenced by this liability of newness. Tripathy (1990) and Nenadic (1990) found evidence to support this theory in their longitudinal studies. Teasdale and Minty (2004) found that 50 percent of Scottish VAT registered firms had ceased operations within five years.

New and especially pioneering organisations have to make such an effort to marshal resources from the surrounding environment that they are heavily scrutinised and affected by the environment at that crucial stage (Carroll & Hannan, 2000). They are imprinted (Stinchcombe, 1965) by the culture, society, values, and prevailing attitudes and conditions at that time, especially in their efforts to gain cognitive and social legitimacy from the key actors in the environment such as policy makers, investors, unions, and other stakeholders. Carroll and Hannan define imprinting as 'a process in which events occurring at certain key developmental stages have persisting, possibly lifelong consequences' (2000, 205), especially at the founding stage. Due to the strong effect of imprinting, focussing on the period during which a new Population (or form of organisation) emerges is a crucial theoretical issue (Aldrich, 1995). By focussing on the emergence of a new Population of organisations (a new industry sector or a new form of organisation for example) one may uncover / reveal particular circumstances of theoretical, empirical, and policy importance.

In their study of organisational design and human resources policies in high technology firms in Silicon Valley, Baron, Burton and Hannan (1999) found that the employment relations models adopted by the founders significantly affected the early careers of their firms – they had adopted the conventional wisdom at that time, and policies adopted by subsequent CEOs had less of an impact. Tucker, Singh and Meinhard's (1990) study of voluntary social services organisations (VSSOs) in Toronto over a period of 13 years showed that organisations founded in a dense organisational population environment, were less likely to change than those founded at other times.

Strategies Facilitating Growth of New Populations

Successful entrepreneurs need a supportive environment (Bull & Willard, 1995) in which their actions are legitimised by the 'rules and norms of the society in which they organisation functions' (van de Ven, 1995, 45). A number of strategies are required to facilitate the growth of entrepreneurs' firms and of new Populations. Aldrich and Ruef (2006) analyse these strategies at four different levels – within the individual organisation; within the Population; between the Populations and at the Community level. They propose a typology of socio-political and cognitive legitimacy. Cognitive legitimacy is about how understood or taken for granted a particular form or way of doing business has become, within a given region or industry. Pioneering entrepreneurs learn 'on the job' but by the time the new Population is established there is an accepted, known way of running it. Thus Irish colleges are run on a seasonal part-time basis, are educational establishments rather than specialist or multi-functional tourism organisations targeting the second level school pupil market among other markets. Routines become culturally embedded; efforts at improvements are based on competency enhancement rather than creative destruction. Socio-political legitimacy is about how the institutions and cultural and political élite (for example, Education, mass media, religion, local and national government) who have the power to change cultural norms and values in a society approve of the new form (Aldrich & Ruef, 2006). Successful entrepreneurs have to work on building networks of trust and co-operation in their efforts to gain legitimacy. It is all the more difficult for the competency-destroying Pioneer introducing a private for-profit adult language tourism enterprise learning on the job – as there are now know accepted ways of conducting the business. In addition the Pioneer needs to build a network of trust and co-operation via the institutions hitherto unfamiliar with the new form of business.

Stages of Emergence of New Populations

The Pioneers establish new forms of enterprises, which in time develop into a Population of enterprises, such as the fish processing stations which were developed along the West coast of Ireland at the end of the 19th century. As this Population develops, related organisations emerge – netmaking, boatmaking, salt supply, barrell making and marketing, thus creating a social structure of interrelated Populations of organisations – a Community of organisations. These Populations struggle in the beginning to gain legitimacy among their peers (other organisations), the local (human) community and the various local, national and supranational institutions. In this paper it will be argued that the Pioneers in three key industries or Communities of Populations in the chosen peripheral region, namely marine resources, tourism, and audio-visual were primarily social or public entrepreneurs followed eventually by private for-profit entrepreneurs. The social and public entrepreneurship paved the way for the private entrepreneurs who would otherwise have faced enormous challenges in terms of marshalling the necessary resources and gaining the relevant legitimacy to exploit the opportunities they saw, or indeed opportunities may have been more difficult to recognise much less exploit given the disadvantages and low entrepreneurship capital in the area.

At macro regional or community level, environmental issues arguably have more effect, especially in new industries and in the start-up phases where entrepreneurs have to depend far more on the environment than in larger organisations, as they marshal the resources to establish a new form of business. This environment can be analysed through the relatively new concept of entrepreneurship capital and its constituents, physical, human,

financial, social, cultural, and psychological capital. The more well established concepts of physical and financial capital are well discussed in the literature of planning, economics, geography, and industrial development. They could be termed the 'hard' tangible capitals. The latter four capitals are intangible 'soft' assets which pose more difficulty in their definition and measurement, and are discussed here in more details.

What follows is a description of entrepreneurship capital, and the constituent capitals of interest in this study, namely – human, psychological, cultural, and social. Physical and financial capital are not discussed in depth as they did not emerge as being of particular relevance in this research any more than might be in any rural or peripheral area. However reference is made to some physical and financial capital issues in the findings.

Entrepreneurship Capital

Entrepreneurship capital (Audretsch & Keilbach, 2004) is a recent addition to other forms of capital listed above and is defined by Audretsch and Keilbach (2004) as:

A milieu of agents and institutions conducive to the creation of new firms ... such as social acceptance of entrepreneurial behaviour, individuals willing to deal with the risk of creating new firms, and the activity of bankers and venture capital agents willing to share risks and benefits. (Audretsch, Keilbach and Lehmann, 2006, 60).

They acknowledge that the measurement and operationalising of entrepreneurship capital is complex and difficult, and that many of its components 'defy quantification' (2006, 69). Their subsequent measures are largely rooted in economics literature through the unidimensional measure of new firm start-up rates, with two submeasures based on start-ups in high technology manufacturing industries with an R&D expenditure of more than 2.5 percent of sales, and start-ups in the ICT industries. While they themselves are of the opinion that start-up activity in any industry should be included, they have taken on board the opinions of other scholars that only those start-ups involving innovative activity should be included.

Given the influence of human, social, and cultural capital as discussed below, Audretsch, Keilbach and Lehmann's definition is quite limiting, excluding non-technical innovation, such as new business forms, social and public entrepreneurship and the wide range of factors which lead to the emergence of new forms of Populations, whether high-tech or not. The general findings of their research are that entrepreneurial capital (as they define it, namely new firm start-ups) is a phenomenon of densely populated regions and that it improves economic performance. While they propose that public policies promoting entrepreneurship are expected to positively affect economic performance, they do not discuss what type of policies might be appropriate. It is interesting to note that although Audretsch et al say that new firm start-ups are a phenomenon of densely populated areas, rural areas actually have high start-up rates (GEM Wales, 2007), although not with the high growth levels normally found in urban areas, where high growth (and usually high tech) firms tend to be established. The usefulness of their definition does not extend beyond this context to underdeveloped or peripheral areas where entrepreneurship capital needs to be fostered from a very low starting point.

Beugelsdijk (2007) examined what he termed entrepreneurial culture, by combining specific questions from the European Values Survey, with human capital education levels, and patent per capita information. He found that economic growth in European regions could be explained by differences in entrepreneurial culture, but in an indirect manner. An earlier study (Beugeldjik & van Schaik, 2005) showed a correlation between regional economic growth and social capital in the EU NUTS1 areas in 54 regions in seven EU countries. Their measure of social capital was based on trust and association membership questions in the European Values Survey, measures also used by Putnam et al (2003) in Italy. In Beugelsdijk and van Schaik's study, Wales and Scotland, the surveyed regions nearest to Ireland, scored relatively low on the associational score, relatively high on trust, but relatively low overall on the social capital index.

Entrepreneurship capital is shaped by values concerning entrepreneurial behaviour, career expectations, norms that affect entrepreneurial expression, social and economic networks, and socio-cultural legitimacy of entrepreneurial behaviour. In any particular region, especially a peripheral rural region, entrepreneurial capital can be inhibited by some aspects of social capital, such as an emphasis on tradition and outmigration of potential leaders. High entrepreneurship areas, once established, can be self-reinforcing in providing much entrepreneurial activity and providing role models for potential entrepreneurs (Bygrave & Minniti, 2000; Lee, Florida & Acs, 2004). In addition, while other capitals might be well developed, psychological capital might prevail as a barrier to higher entrepreneurship capital.

Human Capital

Human capital in terms of the entrepreneur's formal education, knowledge, skills and prior experience was first discussed by Adam Smith ([1904]1976) and later developed by Gary Becker (1964). A number of researchers have highlighted the importance of this capital in terms of entrepreneurship (Beugelsdijk, 2007; Brüderl & Preisendörfer, 1998; Butler & Herring, 1991; Georgellis & Wall, 2000; Shane, 2003). Brüderl & Preisendörfer examined whether business founders with low human capital made additional efforts to compensate for this disadvantage by investing more effort in developing social capital, and found partial evidence to support their hypothesis. Butler and Herring (1991) found human capital to be less predictive than other aspects of an individual's make-up, such as religion and psychological traits. In their study of entrepreneurial human capital in British regions, Georgellis and Wall (2000) refer to all aspects of a region apart from the economic market factors affecting self-employment levels. They use the term more to describe psychological and behavioural traits, rather than the meaning traditionally used - that is, an individual's skills, knowledge, education, and experience.

High levels of education and of human capital do not necessarily lead to increased recognition and exploitation of opportunities (Davidsson & Honig, 2003). Overemphasis on formal education and certification may dampen risk-taking, the forms of formal education chosen or given high status in a society may lead individuals on particular career paths. Davidsson and Honig's research on 380 nascent entrepreneurs illustrated that high human capital led to a higher incidence of opportunity recognition, but that the aspect of human capital most influential in successful opportunity exploitation and establishment of new enterprises was previous experience in a business start-up (2003). While they also addressed business education and training in their research they found it not to have much influence.

Psychological Capital

A fairly new concept is psychological capital (PsyCap), developed by Luthans, Youssef and Avolio (2007) using human and social capital as their point of departure. They measured four components of PsyCap, namely self-efficacy, optimism, hope/perseverance, and resiliency. Luthans et al apply this concept to management and leadership issues, proposing that it can be measured in relation to firms' success. Their work is new pioneering work developed and tested in the field of organisational behaviour. It is generated from the relatively new field of positive psychology. Positive psychology has roots in humanist psychology, with emphasis on wellness and on self-actualisation, rather than the more well known areas of psychology which since the middle of the 20th century have mainly addressed psychological problems and disorders and how they can be treated. In the last few years, this new concept of psychological capital has been applied to entrepreneurship, for example in the link between entrepreneurs' psychological capital and their authentic leadership (Jensen & Luthans, 2006); the relationship between entrepreneurs' psychological capital and well-being (Hmieleski & Carr, 2007); and the value of the psychological capital of immigrant entrepreneurs (Luthans, Norman & Jensen, 2007). The author has not located any study linking psychological capital with a peripheral community or an indigenous minority community, such as that of the Galway Gaeltacht. Given the number of references to

psychological issues the author found during the course of this research, it could be a fruitful avenue of research.

Cultural Capital

The concept of cultural capital was developed by the French psychologist Pierre Bourdieu in the 1970s (Fowler, 1997). It refers to the advantages and status a person can gain in society through her/his forms of knowledge, skills and education. Much of a person's cultural capital is gained from parents, and includes the language one speaks (accent, vocabulary etc), interest in and knowledge of art forms, especially 'high arts' such as classical music and visual art. Cultural capital is related to social class and as the education system and curriculum are primarily developed by the well-educated middle classes, that class benefits more from the system. Sociologist Florida's thesis (2002) is that those of high intellect and cultural capital congregate where their diversity, innovation and creativity are encouraged to flourish, in turn attracting entrepreneurs and those of high human capital. Essentially entrepreneurs and well-educated people choose where to live, based on life-style and quality of life issues as well as on economic opportunities. Regions with heavy emphasis on tradition, lacking in high cultural capital will have difficulty attracting or fostering high human capital or innovative entrepreneurs (Florida, 2002; Lee, Florida & Acs, 2004).

Social Capital

The idea of social capital has a long history dating back to debates on groups, democracy and social integration. It was Bourdieu who first defined and systematically analysed the concept, defining it as 'the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalised relationships of mutual acquaintance or recognition (Bourdieu, 1985, quoted in Portes, 1998, 3). Putnam has researched the historical roots of social capital in his work on the economically successful Emilia-Romagna region in Italy. He proposes that the economic success is rooted in civic engagement and high social capital stretching back as far as the 11th century through the formation of guilds and of mutual co-operative organisations such as co-operatives and rotating credit organisations in the 19th century (Putnam et al, 1993). His thesis is that history matters, and that civics and culture influence economic development rather than vice versa. He posits that social context and history profoundly affect the effectiveness of institutions. Citizens in high social capital communities demand, and are prepared to act collectively to get, more effective public services. Those in less civic communities are more commonly alienated and cynical supplicants (Putnam et al, 1993, 182). Svendsen and Svendsen (2004) have also traced the evolution of social capital in a number of Danish rural communities.

Institutional Thickness

The theory of social capital seeks to explain how some people make beneficial use of their networks and links with others in their community/society. A community with high social capital will have a large number of organisations and institutions such as churches, schools, sports, leisure and cultural clubs and associations, business associations, political parties etc., in essence high institutional thickness (Beugelsdijk & van Schaik, 2005). Through the strong network of interrelationships, certain attitudes, norms and values will emerge. Strong and weak ties will develop between individuals (Granovetter, 1995); high levels of trust will develop between group members, reducing transaction costs and increasing the possibility of co-operative / collective action (Beugelsdijk & van Schaik, 2005). This trust, the ties and networks, and the high social capital can influence educational attainment, and access to sources of beneficial information, to employment, to new ideas and practices, to suppliers and customers. Entrepreneurs make use of these institutions and ties in gaining the legitimacy they require to build their enterprises.

Detrimental Effects of Social Capital

While high social capital is generally seen as positive, there are detrimental effects that can arise out of certain aspects such as emphasis on tradition at the expense of innovation, the

exclusion of outsiders, or dense strong ties (Portes, 1998). These would be common in marginal or disadvantaged groups such as urban enclaves, peripheral communities or indigenous, immigrant or linguistic minorities. Years or generations of outside discrimination are followed by the emergence of downward levelling norms where the community itself frowns on the more ambitious. Group members are pressurised by the group to maintain group solidarity by not joining another group – such as the managerial team or the middle classes. They might be under pressure to support an extended family and community preventing advancement, specialisation and the accumulation of entrepreneurial success. Associating with a new group and adopting new behaviours or attitudes, might limit the socio-cultural legitimacy of their entrepreneurial achievements. The incomer might find it easier to creatively destruct the equilibrium. This form of high social capital might lead to outmigration by those individuals whose entrepreneurial spirit and ambition have been crushed by the pressures of tradition and the stifling barriers to individuality and modernity they encounter in their own communities (Kane, 1977). In the 1980s, a time of high unemployment, 35 percent of recent Irish emigrants left permanent full-time jobs due to low job satisfaction and lack of suitable opportunities at home. These outmigrants may have become entrepreneurs in the places and communities where they themselves were incomers, as attested for in the well-researched literature on immigrant or 'ethnic' entrepreneurship (Ram & Deakins, 1995).

Social Capital and Entrepreneurship

Entrepreneurship researchers have drawn heavily on social capital (Aldrich & Martinez, 2003; Brüderl & Presendörfer, 1998; Jack & Anderson, 2002; Licht & Siegel, 2006) primarily with reference to networks and to Granovetter's work on weak and strong ties (Burt, 2002; Davidsson & Honig, 2003; Granovetter, 1995). High social capital can exist not only in individuals but also at firm, Population of firms and Community of Population levels. Entrepreneurs can work collectively at developing social networks that result in collective action at the level of Populations of new enterprises – for example in legitimising new technologies or business models (Aldrich & Martinez, 2003). High network support in the form of Chambers of Commerce for example can increase the probability of survival and growth (Brüderl & Presendörfer, 1998). In rural areas being embedded in the local community can benefit small entrepreneurs (Jack & Anderson, 2002), legitimising their business and providing customer and employee loyalty, but overembeddedness could stifle entrepreneurial behaviour. Davidsson and Honig (2003) found that during the process from opportunity recognition to opportunity exploitation, specialist knowledge, contacts and actions were increasingly required. Interaction with public support agencies was not as important. From a public policy point of view this would mean that support agencies need to provide increasingly specialist tailored support as nascent entrepreneurs go through the process of enterprise growth.

Methods Used

As no enterprise development research had been conducted on Gaeltacht data, this author's research is primarily a descriptive, exploratory and explanatory project. The first step was to describe what had happened. The exploratory aspect was to gain familiarity and understanding; to seek out and examine trends, categories, exceptions, contradictions, and to put them in context. One objective was to find particularly interesting topics requiring further more rigorous study. The chosen paradigm is a blend of positivist research based largely on quantitative data from secondary sources and phenomenological research based mainly on qualitative data from secondary and primary sources. The two approaches complement and enrich each other. A database of all state-supported new enterprises was collated from annual reports of the three main state bodies which have had responsibility for enterprise or industrial development since the late 1800s – namely the Congested Districts Board (1891–1923), Gaeltarra Éireann (1958–1979) and Údarás na Gaeltachta (1980–2003). Data for the intervening period 1923 to 1957 was collated from official state department documents in National Archive and various university libraries. These data were complemented by qualitative data from historical documents, secondary sources such as local history publications and memoirs, and interviews with 57 key interviewees, the eldest of

whom had served in a senior civil service position in the 1940s. Interviewees included entrepreneurs in the three chosen Communities (audio-visual, marine resources, and tourism); community leaders; public policy makers and others. The author has also spent an extensive amount of her time since childhood in the area, including a five month stay during the interviewing stage.

While the data collated were comprehensive and wide-ranging, there were a number of limitations. The quantitative data are limited to state-supported enterprises. National state business related statistics are published at county level only, and for the earlier period prior to the 1970s, at provincial (regional) level, particularly for the the less developed, less populated province of Connaught in which Co Galway is situated. While the Companies Registration Office database was consulted to ascertain formal registration and thus size/growth aspirations of new start-ups, data per county or per part of county cannot be retrieved. In addition the Central Statistics Office does not publish Gaeltacht region data for any human or corporate census except for data on Irish language usage patterns. Business directories and databases were consulted in an effort to ascertain the extent of non-state supported entrepreneurial activity. Business directories from the 1980s to 2003 revealed a small number of additional start-ups. Business directories for the earlier period, especially from the 1890s to the 1960s did not exist, or where they did, were limited to the three main cities of Dublin, Belfast and Cork. Given the dearth of entries in the early 20th century state provincial-level statistics and in the private business directories; and the extent of state support available to the region, and the qualitative data evidence, the author is confident that the state-supported enterprises provide an accurate and reliable reflection of the evolution and emergence of entrepreneurship in the focal region. The strength of convergence of stories and opinions from the archives and interviews increases the quality of the data and the findings.

Results Obtained

The patterns of emergence and evolution in the three chosen industry sectors – marine, audio visual, tourism, revealed remarkable similarities considering that they emerged in different stages over the century. The natural resources based industry has a long history of centuries, the tourism industry emerged with limited evolution primarily from the 1960s onwards; the audio-visual sector blossomed in the 1990s. The main pattern leading to success was that of significant state involvement and ownership, followed by social entrepreneurship in the form of co-operatives or non-profit organisations, followed eventually by private for-profit ownership. Many of the initial stages of emergence and evolution were led by incomers due to the low entrepreneurship capital, especially psychological capital and low social legitimacy of entrepreneurship in the community, and in the earlier period the low levels of formal education.

Incubation

By the late 19th century, the western seaboard and in particular what was to become the Galway Gaeltacht suffered from poverty, lack of development and an overall lack of hope. At the same time the Celtic Revival led primarily by the better-off, well-educated classes in Dublin recognised the importance of the Gaeltacht areas as the well of the old Gaelic culture key to Ireland's future. The Congested Districts Board was established by the British government in 1891 largely in response to civil unrest regarding land reform. Lack of parliamentary success in obtaining legal and political independence led to *de-facto* self-government in the form of various self-help organisations such as the Irish Agricultural Organisation Society (IAOS), the Gaelic Athletic Association; and for cultural and linguistic matters the Gaelic League. There seemed to be a need for a cultural revolution before political or economic reform could take place. Matthews (2003) argues that these organisations used tradition as a stimulus for innovation and change. Other national Dublin-based, non-profit bodies, or in today's terms, social enterprises, more closely related to economic / industrial development included the Irish Industrial Development Association (established 1906), Inghinidhe na hÉireann ('the daughters of Ireland'), 1901; the Irish

Central Bureau for the Employment of Women (1903) and The Society of United Irishwomen (1910). The IAOS was centrally involved in administering some of the schemes funded by the Congested Districts Board (CDB), and in establishing the Raiffeisen Co-operative Banks. The Gaelic League led initiatives similar to the workers' education schemes in other countries such as Denmark and Nova Scotia, Canada, but with more emphasis on language and culture rather than on subjects more directly relevant perhaps to economic development – such as science, technology and business. The IAOS and the Gaelic League both operated in Gaeltacht areas, as did some of the other social enterprises listed above. At local Gaeltacht level, many of the initiatives were led by the local shopkeeper, the schoolteacher and parish priest – as happened in other rural areas at the turn of the 20th century. The CDB itself established and managed many fish processing plants, textiles workshops and other industrial training centres, largely managed by incomers rather than by local people, despite complaints that local talent was available for the jobs (Royal Commission, 1908). Other than these state or voluntary activities, the business structure was based primarily on 'own-account' or self-employed tradespeople and the small-farm based family. There were a handful of formal organisations – mainly larger merchants and one or two factories in the city area.

The human capital of the area was very low. The 1901 census records an average level of illiteracy of 60 percent in the Galway Gaeltacht (CDB, 1903); up to 42 percent of the population in certain areas were Irish monolingual illiterate – in a country where most formal business was conducted through English. Other than the traditional institutions of family and parish, there were very few other organisations in the Galway Gaeltacht; the national self-help organisations listed above often found it difficult to establish branches in the area. Gerschenkron (1966) proposes that craft guilds instilled some of the pre-requisites for entrepreneurship and innovation, namely quality craftsmanship; honesty in business dealings, and strategic organisation-based co-operation, a situation that did not exist in the Galway Gaeltacht. Many of the incomers employed by the CDB to run CDB funded industries did not speak Irish thus lessening their potential impact. Given the poverty levels, any earned income was spent on improved nutrition and living standards rather than invested in entrepreneurship; no 'capitalists' came forward to invest in the area (CDB, 1914), hardly surprising given the overall lack of development.

Obstacles to entrepreneurship were not merely financial. The long history of colonisation, and of emigration had led to a poverty of the spirit, with the more able having emigrated to England or to North America, and those who stayed behind lacking the necessary psychological capital. The leader of the IAOS co-operative self-help movement Horace Plunkett, a Protestant, complained that Roman Catholics – the majority religion in Ireland and in the Galway Gaeltacht – was 'apathetic, thriftless and almost non-industrial' (Plunkett, 1904). The CDB also often reported this general apathy, lack of hope and ambition, and lack of interest in improvements (CDB 1891 – 1923 Annual Reports). But there is also evidence of complaints about the CDB officials' resistance to local knowledge and difficulties integrating with the local community (Royal Commission, 1908; Synge, 1966), perhaps compounding the local community's lack of faith in the London and Dublin-based Government. In one way the Galway Gaeltacht was a more severe microcosm of a national problem, judging by Plunkett's (1902) address at the 1902 Cork International Exhibition and comments on Roman Catholics.

The CDB baseline report of 1891 gives quantitative evidence of the lack of organisation-building entrepreneurship in the Galway Gaeltacht (CDB, 1892). In summary, in an area with a population of 52,155, there were 131 fairs or markets per annum and just under 2,000 boats, and 16 freshwater fisheries for leisure anglers, but only one fish curing station and one bank or loan fund. In response to the question about 'whether any organised effort has been made to develop the resources or improve the condition of the people' (CDB, 1892-1897; Morrissey, 2001) six of the 10 area reports state 'none'. Three of the reports list social entrepreneurship efforts by wealthy women in knitting, basket making and boat making. Three also list an emigration scheme; one mentions an Industries Fund; another an

effort to buy out crossline fishermen. The character of the people is described mainly as hardworking and industrious but also suspicious of innovation, lacking motivation, easily discouraged, and looking to Government for help. What is striking about the reports is the near lack of a business infrastructure beyond family run small scale merchants / shopkeepers, who were often the fulcrum of the village or townland in terms of buying farm produce and selling food and household wares.

The CDB Annual Reports (1891 – 1923) report on the various initiatives funded by them – either managed directly or by non-profit organisations such as the Community Development Agricultural Banks, the Parish Committee or organisations such as the Beekeepers' Associations. When not run by the CDB's own 'instructors' or 'instructresses', the textiles workshops were sometimes run by the parish priest or by a wealthy private woman in the spirit of social entrepreneurship. These term instructor illustrates that these were viewed as training initiatives rather than for-profit businesses. The CDB Industrial Loan Fund Applications for the years 1901 to 1922 provided loans ranging from from £1 for individuals to buy carpentry tools up to knitting machines and tools for motor engine repair, and in one or two instances for equipment for factories. By 1922 organisation building was still quite under-developed. The Parish Committees, largely made up of local clergymen; resident landlords or their agents; and other local leaders excluding the local trader (who would benefit directly from the disbursements of the Committee), were accused of doing good work with zeal but were not good at record keeping (CDB, 1914). The Agricultural Raiffeisen Banks were initially successful but ultimately failed within two to three to decades. Various reasons suggested include lack of savings in a subsistence agricultural area; weak management; social networks so strong that there was an unwillingness to take action against defaulters; and lack of involvement of local leaders more acceptable to the local community (priests and schoolmasters, rather than landlords etc). Loans were also seen as a conduit for Government grant-aid rather than as an investment in the local area (Guinnane, 1994). Essentially the Banks failed to achieve the social legitimacy required to flourish.

In summary, by the time of the dissolution of the CDB on the founding of the Free State (later the Republic of Ireland) in 1923, there were a few notable traders in the area, as well as craft workshop based boatbuilders, but most organisation-building effort was led by incomers or outsiders. The Pioneers and early fledglings were mainly social or public entrepreneurs. The area was still a pre-industrial landscape with few of the necessary environmental conditions conducive to a high level of entrepreneurship capital. A 1930s report commissioned by the Civil Service Gaeltacht (Economic and Development) Committee gives an indication of the state attitude towards Gaeltacht development. The authors were of the opinion that 'the manufacture of goods mainly for profit must be excluded as far as possible; the industrialisation of the Gaeltacht in the modern sense does not enter into the scheme; industrial expansion in the individualist sense does not enter into the scheme' (NAD, 1933, 11). Preserving the well of the Irish language seemed to be more important than improving the socio-economic situation of Gaeltacht residents – an attitude not confined to only this report or only to state documents. Throughout the early 20th century there was very little second level education provision in the Galway Gaeltacht, with most children able to afford such education leaving the area or availing of scholarships, especially for the training of Irish language teachers in line with Government policy of reviving the language through the education system (Jones, 2006; Kelly, 2002). In terms of social capital no significant new organisations emerged in the Galway Gaeltacht. At national level although there were more banks per capita the sector was considered sluggish (Ó Gráda, 1988). There seems to have been adequate capital available but low income tax rates encouraged a rentier behaviour rather than risk taking (Lee, 1989; Ó Gráda, 1988). However the Galway Gaeltacht remained disadvantaged by comparison. The area continued to be under-developed in terms of industrial development, itself lagging behind European standards, with much of the development led by the state rather than by the private sector. In 1929, a special brand name – Gaeltarra Éireann ('Gaelic Products of Ireland') – and a Round Tower logo were introduced by the Department of Fisheries to develop Gaeltacht textiles. The fact that it Gaeltacht industries were managed by the Department of Fisheries rather than the

Department of Industry and Commerce reflects how under-developed the area was and how far it was from genuine industrialisation. The Gaeltacht Services Industrial Loan Fund accounts for 1935-37 lists minor loans primarily for horses and carts; turf delivery boats; looms and textile equipment; and major loans for a ferry service and a granite quarry. No major organisation building entrepreneurial activity had yet emerged. Analysis of national data reveal few new formal enterprises registered nationwide, let alone in the Galway Gaeltacht (Department of Industry and Commerce, 1923 – 1935). Companies Registered in the Free State (later the Republic of Ireland) under the Companies Consolidation Act, 1923 to 1925 amounted to an average of fewer than 10 per county per annum. Business continued to operate largely on a sole trader type basis.

A series of state departments continued to manage state-owned textiles and fishery 'industries' up to the late 1950s, at which stage it established Gaeltarra Éireann as a state-owned subsidiary to run the industries (mainly textile) previously run directly by a state department. The staff was based in Dublin, but transferred to the Gaeltacht within a decade. Gaeltacht education standards improved with the establishment of more second level schools in line with the national policy of free second level education introduced in 1967. The psychological capital at national level was deemed by New York based consultants to be very low – emigration had drained the country of its 'most vigorous and ambitious youth'; there was a reluctance to accept 'the hazards inherent in changed practices upon which expansion depends'; there was an overall 'anti-materialist philosophy and an asceticism that oppose[d] material aspirations to spiritual goals' (IBEC Technical Services Corporation, 1952, 80). The Galway Gaeltacht lagged further behind.

Emergence and Take-Off

By the late 1960s, local frustration bubbled over into the Gaeltacht Civil Rights movement which challenged the community leadership of the time – largely represented by parents, the clergy and the school masters. Led mainly by the first substantial cohort of local university graduates, as well as some language enthusiasts moving into the area, and inspired by the various civil rights movements in Northern Ireland, Continental Europe and the USA, the movement's agitations included putting forward a representative for the national elections, and broadcasting an Irish-medium pirate radio station. It campaigned for jobs, and for a more democratic Gaeltacht Authority. Out of the campaign emerged the co-operative movement supported by Gaeltarra Éireann which a few years earlier in 1966 had been given the legal entitlement under the Small Industries Scheme to grant-aid private for-profit and/or non-profit entrepreneurs. The co-operative movement was a practical action rooted in middle class idealists who engaged fully with the marginalised Gaeltacht community. Their main activities of the co-operatives were the provision of group water schemes and other social services to local communities. Some of the incoming Gaeltacht Civil Rights leaders were to become managers of some of the more successful co-operatives. By 1980 Gaeltarra Éireann was disbanded and replaced by Údarás na Gaeltachta – the Gaeltacht Authority – with a democratically elected board.

Despite this flurry of collective effervescence, low psychological capital still prevailed throughout the 1960s and even up to the 1980s (Ó hAoláin, 2006, 2007) with officially commissioned reports referring to the Connemara man 'resigned to his fate, lacking in optimism; and survey respondents uncommitted to stating whether they were willing or unwilling/unfit to take up industrial employment if it were available (Symes, 1965, 31). While Gaeltarra Éireann set about developing advance industrial estates, another officially commissioned researcher was of the opinion that 'no industrialist in his right mind' would want to invest in the area given the lack of infrastructure (Mac Aodha, 1971, 29). Local young people saw nothing but emigration for them, despite local opportunities (Ó hAoláin, 2006), and were amazed to see industrial estates sprout up in remote bog locations. Factory tours were organised for their benefit. Gaeltarra's new Gaeltacht headquarters were located not too far from Galway city due to the limited availability of phone lines.

While the national industrialisation policy concentrated on overseas inward investment, Gaeltarra Éireann and later Údarás na Gaeltachta recognised, partly as it had no alternative option, that bottom-up indigenous enterprise development was the key to success. Nevertheless it also continued to focus on job creation via inward investment and this strategy did indeed 'industrialise' the local community in terms of providing industrial employment and management experience. The main industries to emerge in the area were in construction-related activities – quarrying, building, window and door manufacture, plumbing, furniture, and marine-related activities such as fish processing, and boatbuilding. Most of the pioneers of significance were either Údarás na Gaeltachta subsidiaries or joint-ventures primarily between it and outside investors. Apart from providing utility services for their own communities, the Co-operatives were involved mainly in fish processing, textiles, heritage and tourism. Some of the Údarás managers running the aforementioned subsidiaries and joint-ventures, and some of the co-operative managers went on to buy out the businesses and run them on a private basis. In many cases these managers were incomers rather than people born and reared in the area, many moving to the area motivated by their public service careers or their community development and language preservation visions. It would take a full generation after the Gaeltacht Civil Rights movement and the 1960s-70s emergence of industrialisation and organisation-building entrepreneurship, for local people to gain the necessary entrepreneurship capital to take the leadership positions.

The Three Communities

The following section outlines the similarities and contrasts between the three Communities chosen for specific case study analysis, namely marine resources, tourism and audio-visual services. The social and public entrepreneurs are identified in the three Communities, and their roles as Pioneers in developing new Populations are discussed. Social and public entrepreneurs are defined as those individuals and groups who established new organisations on behalf of public bodies or on behalf of community groups. While the new organisations had or have a profit motive, the entrepreneurs leading their establishment were not personal shareholders at that stage, but employed by the public body or the community group.

Pioneers

The Pioneers are defined as the initial organisations or individuals establishing a new form or organisation which later spawns Early Fledglings and eventually a new Population of enterprises. The Pioneers in Galway Gaeltacht entrepreneurship in general were the state bodies and the incoming investors. The Pioneers in the oldest Community – marine resources were state organisations – the CDB running curing stations, and establishing marketing depots and distribution channels. Such was the scale of the job required it is understandable that the CDB had difficulty finding private entrepreneurs to strategically build the sector. Throughout the first half of the 20th century the relevant Government Departments continued to develop the curing and marketing activities. In the second half of the century the individual trawler owners developed the trawler fishing, while Gael Linn, a Dublin based voluntary language promotion organisation developed an oyster farm and fish processing plant. In response to local agitation about lack of local ownership it was eventually transferred to a newly formed locally owned (but incomer-managed) co-operative specifically established to take over the fishing rights and activities hitherto managed by Gael Linn. Meanwhile Gaeltarra Éireann pioneered the aquaculture industry. In the mid 1970s, it established the first commercial shellfish hatchery in Ireland as a wholly owned subsidiary; it developed a salmon and trout farming research centre in conjunction with the state owned Electricity Supply Board; and the local National University of Galway established a shellfish research laboratory. Later in 1979 a co-operative established a fish farm. It was the early 1980s before any privately owned fish farms were established. From the 1970s to the year 2003, there were a total of 95 new fishfarm startups a cause for celebration in such a remote area.

In the case of the Tourism industry, while gentry tourism for hunting and fishing was well developed through the local large estate owners, the newest form of tourism organisation which emerged at the beginning of the 20th century was that of the Irish college. These are educational summer camps at which teenagers learn Irish, living with local families for a few weeks during the summer. The first of these, was established in 1910 by a group of middle class language enthusiasts whose motivation was language preservation rather than profit making. Coiste na bPáistí (the Children's Committee), a 1930s middle class trade-unionist movement with branches throughout the country raised voluntary contributions to send children to the Gaeltacht, their contributions matched by state funding. By the late 1960s a number of other groups of language enthusiasts, some based outside the Gaeltacht were also bringing teenagers into the Gaeltacht to Irish colleges. By the 1970s, many of the Gaeltacht co-operatives had entered the market as early fledglings – with limited levels of success. It was later that private individuals bought out some of the Irish colleges to run them as private concerns, one expert being of the opinion that the privately owned and run colleges have a higher success rate than those run by the local co-operatives nor community groups (Ó Finneadhá, 2006). It must be stated that this particular organisational form is subsidised by the Government as part of its educational and language policy. None is entirely self-sufficient, with approximately 22 percent of income coming from state grant aid for teaching and for accommodation.

Throughout the 20th century, the Irish Tourist Board, and later Údarás na Gaeltachta had encouraged private sector enterprise but was disappointed by the results. The former complained in the 1960s about the lack of private enterprise, and of uptake of its grant-aid. By the 1970s and 1980s, Gaeltarra Éireann and later Údarás na Gaeltachta were supporting the co-operatives and other community groups in various cultural or sporting projects such as heritage centres; museums; water pursuits as well as infrastructural projects such as restaurants or holiday homes. A number of private entrepreneurs established relatively short-lived tourism services; the lack of overall infrastructure perhaps hampering their market growth. Gaelsaioire, an Údarás subsidiary tourism marketing company, eventually proved ineffective. Údarás na Gaeltachta is now seeking co-investors to develop a number of large-scale flagship tourism destinations around which it hopes to see smaller private enterprises emerge. It also supports a large number of voluntary community-run and community-focussed festivals. Despite supporting other marine-based tourism ventures and requiring the co-operatives to develop tourism activities, no Population of any significance has emerged to date. Nevertheless, from 1970 to 2003, there were 97 tourism start-ups, mainly resaurants and cafés (32), tourism development groups (18) and hotels / other accommodation (17). Many of these were community owned and relatively short-lived, suffering from liability of newness in an environment insufficiently supportive in terms of infrastucture or market.

In the case of the Audio Visual sector, the key Pioneer was Údarás na Gaeltachta which invested heavily in a television production training courses in the late 1980s; and the Irish government which established the Irish-medium television broadcaster, TG4 in 1996. This was partly the result of the Gaeltacht Civil Rights campaign of the 1970s and the national agitation (1970s – 1980s) for an Irish medium broadcaster. In 1986, in quite a prescient move, Údarás and the national television broadcaster also established a joint venture production company, whose first manager was at that stage an Údarás employee. Within two decades he had completed a management buyout and the company is now entirely privately owned. A new Population of privately owned independent television production companies has emerged and evolved in the area. In total from the 1970s to the year 2003 there were 63 new foundings mainly made up of the production companies but also post-production, and subtitling / translation.

Stages of Emergence and Growth

In summary it is striking, but perhaps unsurprising how central the state's public bodies, and the local state-funded co-operatives have been in developing the first two Communities, or industry sectors. Large-scale long-term development was required at the

time these two Communities were developing; entrepreneurship capital was particularly low, especially in the earlier marine resources community. The high number of incomers leading the developments is also a reflection of that low entrepreneurship capital in the local population. By contrast while the audio-visual Community, which emerged in the late 1980s to mid 1990s, is ultimately dependent on the state owned and funded broadcaster, privately owned television production companies emerged sooner after the Pioneer. This is probably related to the higher level of formal education required in the sector, as well as higher human, social, and financial capital in the area in the 1980s and 1990s, compared to earlier decades.

In the first two cases the social / public entrepreneurs had to gain socio-cultural legitimacy in the local community. They also had to gain cognitive legitimacy in the sense that these new organisational forms were new and there was no established, well-understood way of managing and developing them. Both the fish farms and the Irish colleges are now accepted as part of the regional 'brand' and identity; yet employment in the latter Population remains seasonal / part-time. It is disappointing how little variation has occurred in terms of spawning new organisational forms – such as adult linguistic tourism, or marine tourism enterprises, or value-added fish processing - which could improve the employment situation and develop new markets. In the audio-visual sector, legitimacy has been gained, the local community aspires to working in the sector, and third level training is available. Relatively little variation has happened with most of the independent production companies relying mainly on TG4 for commissions; few developing other markets in Ireland or abroad. New private sector Pioneers in adult linguistic tourism are slowly emerging, facing legitimacy challenges in creating a new cultural tourism product.

Legitimacy of Entrepreneurship

The lack of entrepreneurship capital (in the sense of organisation building) in Ireland throughout the 20th century is well documented (Industrial Policy Review Group, 1992; Lee, 1989). The Galway Gaeltacht unsurprisingly records high levels of scepticism for private as well as social/public entrepreneurs. The CDB encountered resistance to innovation; the IAOS Agricultural Banks failed after a decade or two. They were operating in relatively unsupportive environments given the power of the local shopkeeper and the levels of poverty in the area. The first Irish colleges were established by outsiders or incomers, rather than locals or returned locals. In the 1950s, three local men endeavouring to establish a seaweed processing plant encountered resistance from their community (Ó Catháin, 2006). In the second half of the 20th century, Gaeltarra had difficulty fostering entrepreneurship and industrialising the area; so much so it commissioned sociological and ethnographic research to see how the reluctance and resistance could be overcome (Kane, 1977; Symes, 1965). Locals were cynical about the potential longevity of new factories, and reluctant to take on management roles. The co-operative movement which followed the Gaeltacht Civil Rights movement continues to suffer weaknesses largely ascribed to lack of focus, and weak management skills, and reluctance to form strategic alliances with neighbouring co-operatives (Breathnach, 1986). While the co-operative movement developed well in the dairying regions elsewhere in Ireland, it was slow to develop in the Gaeltacht. By the late 1970s the Gaeltacht co-operatives were still seen as yet another state provider rather than as self-help organisations in which the community could be the leading actor in its own future (Johnson, 1997). The culture of dependency (Comharchumann Forbartha na nOileán, 1979) was slow to change to a culture of empowered self-determination.

The co-operatives were, and to a great extent still are, focussed on the special purpose of community development and the generation of employment – of any kind (Breathnach, 1986; Ó Conchubhair, 2006). But they were and still are, functionally diffuse, in that they are generalists rather than specialists – some providing a number of services from community water schemes, to agriculture, to handcrafts and textiles, to tourism services. Many were at times substantial employers in their areas but once that initial purpose had been addressed and more opportunities were available elsewhere or locally, their initial special purpose was no longer central.

Individual entrepreneurs encountered scepticism when sharing their ambitious ideas with their community, or found it difficult to engage successfully with the public agencies. There was some reluctance in the tourism sector to associate the language with financial profit, with some frowning upon private entrepreneurs in that and the audio-visual sector who built successful profit-making enterprises (Ní Bhrádaigh, 2008; Ó Foighil, 2006).

Such was the scale of development required that only state-supported initiatives could succeed. Poverty and disadvantage needed to be directly alleviated before people could move beyond short-term horizon multiple-source-of-income activities. Heroes and role models needed to gradually develop within the local community. Lack of human capital and strong inward-looking social capital with little outward-linking capital made it difficult for the local community to build new organisations. This was compounded by low psychological capital resulting from socio-economic and linguistic marginalisation. Preservation of the language was seen to be at odds with modernisation. Emigration drained the area of the more ambitious and perhaps more entrepreneurial people. It was easier for incomers to be the entrepreneurs. The technical skills required for industrialisation needed to be matched by the softer skills so important for entrepreneurship.

Schumpeter's creative destruction would 'unfold through decades or centuries' (1943, 83) rather than in a few years. In the meantime the state would have to act as the incubator, encouraging entrepreneurial organisation-building in the community, so that in time private entrepreneurs could have available to them the necessary resources to marshal together to achieve their visions. A number of public sector employees prided themselves on their intrapreneurship, or entrepreneurial behaviour within their organisations. A number of co-operative managers, mainly incomers, led the spinout of some of the co-operative's activities. Public or social entrepreneurship had to precede private entrepreneurship, the former finding it easier to gain legitimacy and the necessary network and support than the latter. While the state agencies had the technical skills to industrialise the area, they had neither the soft skills, the understanding of the local community and the necessary entrepreneurial capital in the local community to foster indigenous local entrepreneurship. Industrialisation via inward investment developed the necessary skills and financial capital to eventually provide the seedbed for locally owned and established enterprises (Ó hAoláin, 2007). It must also be remembered that the concept of indigenous entrepreneurship was not part of national Government policy until the early 1990s (Industrial Policy Review Group, 1992).

Conclusion

Patterns of entrepreneurship in terms of organisation building, pioneering of new business activities, business ownership and enterprise growth and development were tracked using quantitative and qualitative data. Rooted in the theoretical frameworks of corporate demography, organisation evolution and entrepreneurship capital, an interesting finding was the importance of social entrepreneurship in developing the necessary entrepreneurship capital for private entrepreneurship in terms of true organisation building activity rather than self-employed multiple-income activity. Physical and human capital issues were addressed but the more soft support-related social and psychological capital proved to be key issues. Developing organisation-building entrepreneurship (rather than self-employed, multiple income source entrepreneurial behaviour) in a peripheral historically disadvantaged community takes more than one generation. While physical and human capital weaknesses are addressed in terms of infrastructure and education, and financial capital can be provided through grant aid and employment income, social capital and psychological capital are also important factors in fostering entrepreneurship in the community.

Implications for Policy

The long-term focus of the research draws attention to the challenges faced by policy makers and those implementing policies. Hindsight and reflection on historical evidence

validates many of the statements made by policy makers at the turn of the 20th century – for example in terms of the levels of resignation and hopelessness in the community (CDB 1892-1897). Those same issues arose again throughout the early to mid 20th century, with Gaeltarra Executives frustrated at the lack of soft skills, social and psychological capitals necessary for entrepreneurship, even when financial support was offered. While physical industrialisation took place from the 1960s onwards, psychic industrialisation (in terms of community attitudes and psychological capital) did not emerge until the 1980s. By then the state bodies understood better the importance of the softer cultural and psychological issues but found it difficult to break through the web of dejection and resignation. The long term focus also illustrated the pattern of the state leading entrepreneurship in each Community for up to two decades before community- and privately-owned enterprise could emerge. Gerschenkron's (1966) pre-requisites of industrialisation, in terms of guilds, self-organisation and formal organisation-building needed state leadership. The research also illustrated that public service provided good incubation for many subsequent entrepreneurs. Providing public servants, particularly in enterprise development agencies with a temporary safety net of the option to return to public service may encourage them into private entrepreneurship.

A conventional wisdom which has been challenged in this paper is the opinion that the state often interferes with successful entrepreneurship development through its policies and regulations. In a disadvantaged area, the scale of development challenge is so enormous that state intervention is required. In addition while infrastructural and institutional supports such as education may be required, the psychological capital factors may need particular attention. Given the historical distrust of entrepreneurs, perhaps the legitimacy of private entrepreneurship is best preceded by public and social entrepreneurship in preparation for private entrepreneurship. In all three Communities (marine resources, audio-visual, and tourism) the Pioneers or 'kick-starters' were public or social entrepreneurs. In the first two, the state acted as a large scale Pioneer developing the aquaculture industry and the television production, ultimately resulting in a high level of successful private enterprise. In the last case (tourism), the state did not follow the same pattern, and development has not been as successful in terms of new enterprise foundings or growth. In the marine and tourism sectors the community co-operative or voluntary sectors featured strongly as Pioneers or early fledglings, while the audio-visual sector features many small scale independent production companies motivated more by artistic and/or linguistic values than profit-making (Ní Bhrádaigh, 2008).

Lessons learned from the marine and audio-visual sectors could be applied to addressing the tourism sector. Údarás na Gaeltachta has still not found suitable co-investors to develop large-scale strategically-important tourism enterprises in the region, nor in the other Gaeltacht regions. The financial and political support is available, local private wealth and business acumen are available; a better understanding of how to develop tourism not detrimental to the fragile linguistic situation exists; yet the hope and vision for, and legitimacy of, a viable tourism sector does not seem to exist in the local community. Soft supports in terms of encouragement, promotion of successful role models, training and mentoring may be as powerful as hard financial support. In the last 20 years, staff of enterprise development agencies usually come from a business, commerce or economics background and the approach taken to fostering entrepreneurship would be largely managerial with a relatively short-term focus of five to 10 years. There is also the short-term political pressure of job creation. However in a peripheral or disadvantaged area, more patience, and a more thorough understanding of deep-seated cultural norms and attitudes are required. Gaeltarra Éireann was quite far sighted in employing at one stage both an anthropologist and a sociologist to assist in its industrial development agenda.

While hard-support in the form of factory facilities or grant-aid is an important factor, the soft supports of training, mentoring, networking, at the individual level; and career aspiration, legitimacy of entrepreneurship, and role models at community level are perhaps more important. Development agencies may need to establish the pioneering start-ups with the long term view of fostering privately-owned spin-offs and ultimate transfer of the publicly

or socially owned / motivated enterprises into private ownership. Working in, or with, the initial pioneering organisations allows potential entrepreneurs to gain the necessary experience, networks, and role models. A peripheral community apprehensive about embracing innovation due to low entrepreneurship capital may legitimise community-owned social enterprise sooner than individual for-profit entrepreneurs. It may be advantageous for policy makers to collaborate with educators and researchers in developing a deeper understanding of how potential, nascent and current entrepreneurs in peripheral areas can be successfully supported.

While Gaeltacht people are of the same ethnic background as the rest of the Irish nation, and although some might query the relevance of comparison with indigenous (popularly inferred as non-White, unmodernised) communities, the challenges faced by these indigenous communities' leaders in developing community- and privately-owned enterprises are very similar to those encountered in the Gaeltacht (Dana & Anderson, 2007). The historical similarities of colonialism, marginalisation and language loss are very similar. Perhaps these indigenous communities are in the same situation the Gaeltacht community was in up to the 1960s in terms of entrepreneurship capital, and its constituent parts, especially human, social, and psychological capital.

References

- Akutagawa, Michie (1986) 'A Linguistic Minority under the Protection of its Own Ethnic State: A Case Study in an Irish Gaeltacht' in Mac Eoin, Gearóid, Anders Ahlqvist & Donncha Ó hAodha (eds) *Third International Conference on Minority Languages: Celtic papers*, Multilingual Matters, Clevedon.
- Aldrich, H.E. (1995) 'Entrepreneurial Strategies in New Organisational Populations', in Bull I. & Thomas, H. & Willard, G. *Entrepreneurship: Perspectives on Theory Building*, Pergamon Elsevier Science Ltd., Oxford, pp 91-106.
- Aldrich, Howard E. & Martha Martinez (2003) 'Entrepreneurship as a Social Construction', in Acs, Zoltan A. & David B. Audretsch (eds) *Handbook of Entrepreneurship Research*, Kluwer Academic Publishers, Dordrecht, pp 359 - 399.
- Aldrich, Howard E. & Martin Ruef (2006) *Organisations Evolving, 2nd edition*, Sage Publications, London.
- Aldrich, Howard, U. Staber, C. Zimmer, & J.J. Beggs (1990) 'Minimalism and Organisational Mortality: patterns of disbanding among US trade associations: 1900 – 1983', in Singh, J.V. *Organisational Evolution: new directions*, Sage Publications, California.
- Audretsch, David B. & Max Keilbach (2004) "Does Entrepreneurship Capital Matter?" *Entrepreneurship Theory and Practice*, Volume 28, Issue 5, September, Fall, 419 - 429.
- Audretsch, David, B., Max C. Keilbach & Erik E. Lehmann (2006) *Entrepreneurship and Economic Growth*, Oxford University Press, Oxford.
- Austin, James, Howard Stevenson & Jane Wei-Skillern (2006) 'Social and Commercial Entrepreneurship: Same, Different, or Both?' *Entrepreneurship Theory and Practice*, Vol XXX January, 1 – 22.
- Baron, J.N., Burton, M.D. & Hannan, M.T. (1999) 'Engineering Bureaucracy: the Genesis of Formal Policies, Positions and Structures of High Technology Firms', *Journal of Law, Economics and Organisations*, 15: 1-41.
- Baum, J.A.C. & Singh, J.V. (eds) (1994) *Evolutionary Dynamics of Organisations*, Oxford University Press, New York.
- Becker, Gary S. (1964) *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*, National Bureau for Economic Research, Columbia University Press, Chicago.
- Beugelsdijk, Sjoerd (2007) 'Entrepreneurial Culture, Regional Innovativeness and Economic Growth', *Journal of Evolutionary Economics*, Vol 17, pp 187 – 210.
- Beugelsdijk, Sjoerd & Ton van Schaik (2005) 'Differences in Social Capital between 54 Western European Regions', *Regional Studies*, Volume 39, Issue 8, pp 1053 – 1064.

- Breathnach, Proinnsias (1988) 'Popular perception of official development policies in the west of Ireland' in Byron, Reginald (ed) *Public Policy and the periphery: problems and prospects in marginal regions*, Queen's University Belfast pp 153-160.
- Brooks, Arthur C. (2009) *Social Entrepreneurship: a modern approach to social value creation*, Prentice Hall, New York.
- Brüderl, Josef & Peter Preisendörfer (1998) 'Network Support and the Success of Newly Founded Business', *Small Business Economics*, Volume 10, pp 213 – 225.
- Bull, I. & Willard, G. (1995) 'Towards a Theory of Entrepreneurship', in Bull I. & Thomas, H. & Willard, G. *Entrepreneurship: Perspectives on Theory Building*, Pergamon Elsevier Science Ltd., Oxford, pp 1–16.
- Burt, Ronald S. (2002) 'The Network Entrepreneur' in Swedberg, Richard (ed) *Entrepreneurship: the Social Science View*, Oxford University Press, pp 281 – 307.
- Butler, John Sibley & Cedric Herring (1991) 'Ethnicity and Entrepreneurship in America: toward an Explanation of Racial and Ethnic Group Variations in Self-Employment', *Sociological Perspectives*, Vol 34, No 1, pp 79 - 94.
- Bygrave, William & Maria Minniti (2000) "The Social Dynamics of Entrepreneurship," *Entrepreneurship Theory and Practice*, Volume 24, Issue 3, Spring, 25-36
- Carroll, G.R. & Hannan, Michael T. (2000) *The Demography of Corporations and Industries*, Princeton University Press, New Jersey.
- CDB (Congested Districts Board) (1891 – 1923) *Annual Reports*, Dublin.
- CDB (Congested Districts Board) (1892 - 1897) *Base Line Reports*, Dublin (Mick's Collection, Trinity College Dublin).
- Comharchumann Forbartha na nOileán (1979) *Community Education Project, Submission for Grant Aid to Van Leer Foundation*, Leitir Móir.
- Commins, Patrick (1988) 'Socio-economic development and language maintenance in the Gaeltacht', *International Journal of the Sociology of Language*, lxx, pp 11 – 28.
- Dana, Léo-Paul & Robert B. Anderson (eds) (2007) *International Handbook of Research on Indigenous Entrepreneurship*, Edward Elgar, Cheltenham.
- Davidsson, Per & Benson Honig (2003) 'The role of social and human capital among nascent entrepreneurs', *Journal of Business Venturing*, volume 18, pp 301-331.
- Delacroix, J. & Carroll, G.R. (1983) 'Organisational Foundings: an Ecological Study of the Newspaper Industries of Argentina and Ireland', *Administrative Science Quarterly*, 28: 274-291.
- Denvir, Gearóid (2002) 'The Linguistic Implications of Mass Tourism in Gaeltacht Areas, *New Hibernia Review / Iris Éireannach Nua*, Volume 6, No 3, (Autumn / Fómhar), pp 23 - 43.
- Department of Industry and Commerce (1923 – 35) *Companies Registered in the Free State under the Companies (Consolidation) Act 1923 – 1935*, Dublin.
- Durkheim, Emile (1971) *The Elementary Forms of Religious Life*, George Allen & Unwin Ltd, London (translated by J.W. Swain, originally published in French in 1912).
- Fennell, Desmond (1976) 'Organising Connacht for Economic and Social Growth', *Administration*, Vol 24, No 3, 337 – 349.
- Florida, Richard L. (2002) *The Rise of the Creative Class and How It's Transforming Work, Leisure, Community and Everyday Life*, Basic Books, New York.
- Fowler, Bridget (1997) *Pierre Bourdieu and cultural theory: critical investigations*, Sage, London.
- Freeman, J. (1990) 'Ecological Analysis of Semiconductor Firm Mortality' in Singh, J.V. *Organizational Evolution: new directions*, Sage Publications, London, pp53 –77.
- GEM Wales (2007) *Wales Executive Summary Report*, National Entrepreneurship Observatory for Wales, Cardiff & Glamorgan.
- Georgellis, Yannin & Howard J. Wall (2000) 'What Makes a Region Entrepreneurial? Evidence from Britain', *Annals of Regional Science*, Volume 34, Issue 3, pp 385 – 403.
- Gerschenkron, Alexander (1966) 'The Modernization of Entrepreneurship' in Weiner, Myron (ed) *Modernization: The Dynamics of Growth*, Basic Books, New York (reprinted in Swedberg, Richard (2000) (ed) *Entrepreneurship: the social science view*, Oxford University Press, Oxford pp 129 – 138.
- Government of Ireland (1926) *Gaeltacht Commission: Report*, Oifig an tSoláthair, Dublin.

- Granovetter, Mark (1995) 'The Economic Sociology of Firms and Entrepreneurs', in Portes, Alejandro (ed) *The Economic Sociology of Immigration*, Russell Sage Foundation, LOCATION (reprinted in Swedberg, 2000)
- Hannan, M.T., Ranger-Moore, J. & Banaszak-Holl, J. (1990) 'Competition and the Evolution of Organisational Size Distribution', in Singh, J.V. (1990) *Organisational Evolution: new directions*, Sage Publications, California.
- Hindley, Reg (1990) *The Death of the Irish Language: a qualified obituary*, Routledge, London.
- Hmieleski, Keith M. & Jon C. Carr (2007) 'The Relationship between Entrepreneur Psychological Capital and Well-Being', *Frontiers of Entrepreneurship Research*, Babson, Boston.
- Hulgård, Lars & Roger Spear (2006) 'Social Entrepreneurship and the mobilisation of social capital in European social enterprises' in: Nyssens, Marthe with Sophie Adam & Toby Johnson (ed) (2006) *Social Enterprise; at the crossroads of market, public policy, and civil society*, Routledge, London, pp 75 – 108.
- IBEC (1952) An Appraisal of Ireland's Industrial Potentials, IBEC Technical Services Corporation, New York.
- Industrial Policy Review Group (1992) *A Time for Change: industrial policy for the 1990s*, Department of Industry and Commerce, Stationery Office, Dublin ('The Culliton Report')
- Jack, Sarah L. & Alistair R. Anderson (2002) 'The Effects of Embeddedness on the Entrepreneurial Process', *Journal of Business Venturing*, Vol 17, pp 467 – 487.
- Jensen, Susan M. & Fred Luthans (2006) 'Relationship between Entrepreneurs' Psychological Capital and Their Authentic Leadership', *Journal of Managerial Issues*, Vol XVIII, No 2, Summer, 254 – 273.
- Johnson, Maureen (1979) The Co-operative Movement in the Gaeltacht, *Irish Geography*, Volume 12, pp 68 – 81.
- Johnson, Nuala C. (1992) 'Nation-building, language and education: the geography of teacher recruitment in Ireland, 1925 – 1955', *Political Geography*, Vol 11, No 2, March, pp 170 - 189.
- Johnson, Nuala C. (1993) 'Building a nation: an examination of the Irish Gaeltacht Commission Report of 1926', *Journal of Historical Geography*, 19, 2: 157-68.
- Johnson, Nuala C. (1997) 'Making Space: Gaeltacht policy and the politics of identity', in Graham, Brian (ed) *In Search of Ireland: a cultural geography*, Routledge, London.
- Jones, Valerie (2006) *A Gaelic Experiment: the preparatory system 1926 - 1961 and Coláiste Moibhí*, The Woodfield Press, Dublin.
- Kane, Eileen (1977) *The Last Place God Made: Traditional Economy and New Industry in Rural Ireland, Vols 1 – 4*, HRA Flex Books, Inc, New Haven.
- Keane, Michael J., Mary Cawley & Mícheál S. Ó Cinnéide (1983) Industrial Development in Gaeltacht Areas: the work of Údarás na Gaeltachta, *Cambria*, Vol 10, No 1, pp 47 – 60.
- Kearns, Kevin C. (1974) 'The Resuscitation of the Irish Gaeltacht', *Geographical Review*, Vol 64, No 1 (January), pp 82 – 110.
- Kelly, Adrian (2002) *Compulsory Irish: Language and Education in Ireland, 1870s - 1970s*, Irish Academic Press, Dublin
- Kenny, Ivor (1972) 'The Future of the Gaeltacht', *Administration*, Volume 20 (3), 3 – 15.
- Lee, J.J. (1989) *Ireland 1912–1985: Politics and Society*, Cambridge University Press, Cambridge.
- Lee, Sam Youl, Richard Florida & Zoltan A. Acs (2004) 'Creativity and Entrepreneurship: a Regional Analysis of New Firm Formation', *Regional Studies*, Volume 38 Issue 8, pp 879 – 891, November.
- Licht, Amir N. & Jordan I. Siegel (2006) The Social Dimensions of Entrepreneurship, in Casson, Mark, Bernard Yeung, Anuradha Basu & Nigel Wadeson (eds) *The Oxford Handbook of Entrepreneurship*, Oxford University Press, Oxford, pp 511 – 539.
- Luthans, Fred, Carolyn M. Youssef & Bruce J. Avolio (2007) *Psychological Capital: Developing the Human Competitive Edge*, Oxford University Press, Oxford.
- Luthans, Fred, Stephen M. Norman & Susan M. Jensen (2007) 'The Value of the Psychological Capital of Immigrant Entrepreneurs', *International Journal of Business and Globalisation*, Vol 1, No 2.

- Mac an Iomaire, Peadar (1983) 'Tionchar na Tionsclaíochta ar Ghaeilge Chonamara Theas' *Teangeolas*, 16, Earrach / Spring, pp 9 – 18.
- Mac Aodha, Breandán (1971) *The Galway Gaeltacht Survey 1968-69*, Social Sciences Research Centre, University College Galway, Galway.
- McManus, Patrick (2004) *Definition of the Social Economy in Northern Ireland: finding a way through*, Social Economy Network, Belfast.
- Marino, Alessandro (2006) 'The Role of Financing in Ensuring Growth', In: Perrini, Francesco (ed) (2006) *The New Social Entrepreneurship: What Awaits Social Entrepreneurial Ventures?*, Edward Elgar, Cheltenham, pp 65 – 80
- Mathews, P.J. (2003) *Revival: The Abbey Theatre, Sinn Féin, the Gaelic League and the Co-operative Movement*, Field Day Monographs, Cork University Press in association with Field Day, Cork
- Morrissey, James (2001) *On the Verge of Want*, Crannóg Books, Dublin
- Mottiar, Z. & Jacobson, D (2002) 'The Importance of place, space and culture in the development of an industrial agglomeration in Ireland: the furniture industry in Co Monaghan', in Theile, K. & Ó hÓgartaigh, C. (eds) *International Business Education: International New Enterprise Development*, Shaker Verlag, Aachen
- NAD (National Archives, Dublin) (1933) *Report to the Gaeltacht (Economic and Development) Committee*, p 11 (File S7447).
- Nenadic, Stana (1990) 'The life-cycle of firms in late nineteenth century Britain' in Jobert, Philippe & Michael Moss (1990) *The Birth and Death of Companies: an historical perspective*, Parthenon Publishing Group, Carnforth.
- Ní Bhrádaigh, Emer (2008) 'TG4@10: an léargas fiontraíochta,' (TG4@10: the entrepreneurship view), In: O'Connell, Eithne, John Walsh & Gearóid Denvir (eds) *TG4@10: Deich mBliana de TG4*, Cló Iar-Chonnachta, Indreabhán, 137 – 154.
- Nyssens, Marthe with Sophie Adam & Toby Johnson (ed) (2006) *Social Enterprise; at the crossroads of market, public policy, and civil society*, Routledge, London.
- Ó Catháin, Pádraic (2006) Personal Interview.
- Ó Cinnéide, Mícheál S. & M.J. Keane (1988) 'Local Socio-Economic Impacts associated with the Galway Gaeltacht', Social Sciences Research Centre, NUI Galway.
- Ó Cinnéide, M., M.J. Keane, & M. Cawley (1985) 'Industrialisation and Linguistic Change among Gaelic-Speaking Communities in the West of Ireland', *Language Planning and Language Problems*, Vol. 9, No. 1, Spring.
- Ó Conchubhair, Morgan (2006) Personal Interview.
- Ó Conghaile, M. (1988) *Conamara agus Árainn 1880 – 1980: Gnéithe den Stair Shóisialta*, Cló Iar-chonnachta, Béal an Daingin, Conamara.
- Ó Finneadhá, Séamas (2006) Personal Interview, 14 February.
- Ó Foighil, Mícheál (2006) Personal Interview.
- Ó Giollagáin, Conchúr, Seosamh Mac Donnacha, Fiona Ní Chualáin, Aoife Ní Shéaghda & Mary O'Brien (2007) *Staidéar Cuimsitheach Teangeolaíoch ar Úsáid na Gaeilge sa Ghaeltacht: Príomhthátaí agus Moltaí / Comprehensive Linguistic Study of the Use of Irish in the Gaeltacht: Principal Findings and Recommendations*, An Roinn Gnóthaí Pobail, Tuaithe agus Gaeltachta, Baile Átha Cliath.
- Ó Gráda, Cormac (1988) *Ireland before and after the Famine: explorations in economic history, 1800-1925*, Manchester University Press, Manchester.
- Ó hAoláin, Pádraig (2006) Personal Interview, 7 September.
- Ó hAoláin, Pádraig (2007) Formal Response to Ní Bhrádaigh (2007) 'Developing Entrepreneurship in a Marginal Region' paper delivered at the Conference of the Irish Academy of Management, Belfast, 3 – 5 September.
- Ó Murchú, Máirtín (1970) *Urlabhra agus Pobal / Language and Community*, Comhairle na Gaeilge, Dublin.
- Ó Tuathaigh, M.A. Gearóid (1990) *The Development of the Gaeltacht as a Bilingual Entity*, Institiúid Teangeolaíochta Éireann, BÁC.
- Perrini, Francesco (ed) (2006) *The New Social Entrepreneurship: What Awaits Social Entrepreneurial Ventures?*, Edward Elgar, Cheltenham.

- Plunkett, Sir Horace (1902) Opening Address at the Industrial Conference held in connection with the Cork International Exhibition of 1902, 22 – 24 October, Department of Agriculture and Technical Instruction (Available in Special Collections, UCD, Ref 44.Q.18).
- Plunkett ([1904] 1983) *Ireland in the New Century*, Irish Academic Press, Dublin.
- Portes, Alejandro (1998) 'Social Capital: Its Origins and Applications to Modern Sociology', *Annual Review of Sociology*, Volume 24, pp 1 – 24.
- Putnam, Robert, Robert Leonardi & Raffaella Y. Nanetti (1993) *Making Democracy Work*, Princeton University Press, Princeton, NJ.
- Ram, M. & Deakins, D. (1995) *African-Caribbean Entrepreneurship in Britain*. University of Central England, Birmingham.
- Royal Commission on Congestion in Ireland (1908) *10th Report, Counties Galway, Mayo and Roscommon*, Dublin.
- Schumpeter, Joseph A. ([1943] 1987) *Capitalism, Socialism and Democracy*, Allen & Unwin, London.
- Scottish Executive (2007) *A Social Enterprise Strategy for Scotland*, Edinburgh.
- Shane, Scott (2003) *A General Theory of Entrepreneurship: the Individual – Opportunity Nexus*, Edward Elgar, Cheltenham.
- Singh, J.V. (1990) *Organisational Evolution: new directions*, Sage Publications, California.
- Smith, Adam ([1904] 1976) *An Inquiry into the Nature of the Causes of the Wealth of Nations*, Methuen & co, London.
- Steyaert, Chris & Daniel Hjorth (eds) (2006) *Entrepreneurship as Social Change: a third new movements in entrepreneurship book*, Edward Elgar, Cheltenham.
- Stinchcombe, A.L. (1965) 'Social Structure and Organisations', in March, J.G. (ed) *Handbook of Organisations*, Rand Mc Nally & Co. Chicago, pp 142-193.
- Swendsen, Gunnar Lind Haase & Gert Tinggaard Swendsen (2004) *The Creation and Destruction of Social Capital: Entrepreneurship, Co-operative Movements and Institutions*, Edward Elgar, Cheltenham.
- Symes, David G (1965) *The Population Resources of the Connemara Gaeltacht: An Analysis of the Employment Potential; a memorandum to the Board of Gaeltarra Éireann*, Department of Geography, University of Hull. miscellaneous series, 3, (Galway County Library, Island house, Cathedral Sq., Mary Kavanagh, 1996)
- Synge, John Millington (1966) *Collected Works II: Prose*, Oxford University Press, Oxford.
- Teasdale, Paul & Jessica Minty (2004) *Scottish Economic Statistics: Analysis of Firm Closure and Survival*, Scottish Executive, Edinburgh.
- Tucker, D.J., Singh, J.V. & Meinhard, A.G. (1990) 'Founding Characteristics, Imprinting and Organisational Change', in Singh, J.V. *Organisational Evolution: new directions*, Sage Publications, California, pp 182 - 200.
- Tripathy, Dwijendra (1990) 'Birth, growth and death of firms in a proto-industrial economy – the experience of the Ahmedabad textile industry', Jobert, Philippe & Michael Moss (eds) *The Birth and Death of Companies: an historical perspective*, Parthenon Publishing Group, Carnforth
- van de Ven, A.H. (1995) 'The Development of an Infrastructure for Entrepreneurship', in Bull I. & Thomas, H. & Willard, G. *Entrepreneurship: Perspectives on Theory Building*, Pergamon Elsevier Science Ltd., Oxford, pp 39 - 63.

**Balancing Sustainability and Profitability in Entrepreneurial Practice:
An Institutional Logics Perspective**

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Abstract

We aim to contribute to entrepreneurship literature by considering the dialectal relationship between entrepreneurial practice and the institutional logics of sustainability and profitability. We acknowledge both the embeddedness and the agency inherent to sustainable development, such that field-level properties can influence entrepreneurial practice, and entrepreneurs can selectively combine the two logics. First, we note several field-level factors that constrain the ways in which entrepreneurs may balance the two logics. Second, we argue that entrepreneurs can advance their interests by selectively deploying the two logics through a process of classification.

Keywords: sustainable development; institutional logics; classification

1. Introduction

Echoing the preoccupation with sustainability both in society and in the field of management and organization studies (e.g., Hoffmann and Ventresca, 2002; Jennings and Zandbergen, 1995; Jermier et al., 2006; Shrivastava, 1994), the issue of sustainability increasingly appears at the forefront of entrepreneurship and small business research (e.g., Cohen and Winn, 2007; Dean and McMullen, 2007; Hall and Vredenburg, 2007; Schaper, 2002). Research in social entrepreneurship, for instance, focuses on the non-economic nature of the objectives put forward by entrepreneurs and their concerns about the environmental impact of their operations (Bornstein, 2004; Dees, 2001). Calls for sustainable development, and the associated expectations about the quality of the natural environment, may represent the most important social movement of the late twentieth century (Derksen and Gartrell, 1993; Dunlap and Mertig, 1992). The increasing popularity of the notion of “sustainable development,” though relevant to all businesses, is arguably most challenging for newcomers seeking to enter a field—labeled hereafter as entrepreneurs—because they have limited knowledge about how to navigate field-specific rules and what field incumbents’ expectations about sustainable practices might entail (Aldrich, 1999).¹ Thus, entrepreneurs may confront expectations to increase their awareness of the impact of their operations on the quality of the natural environment, promote sustainable business practice, and ultimately strike a balance between profitability and responsible environmental stewardship (Colby, 1991; Jermier et al., 2006; Schaper, 2002).

Extant literature typically conceptualizes the two notions of “sustainability” and “profitability” as objective, measurable ends, while entrepreneurs, by and large, are conceived of

¹ Although the arguments developed herein might have relevance to all entrepreneurs—i.e., new or established entrepreneurs, or those internal or external to a field—we specifically focus on those individuals who are newcomers to a field. Sustainability and profitability concerns may be important for all entrepreneurs, yet maintaining and developing an appropriate balance between these two concerns is most challenging for aspiring entrepreneurs who are newcomers to a field as they are less attuned to the field’s rules (Aldrich, 1999; Pe’er and Vertinsky, 2008).

as individuals endowed with the agency to introduce new sustainable practices in their respective fields (Cohen and Wynn, 2007; Dean and McMullen, 2007). Yet some scholars and activists increasingly recognize the social embeddedness of sustainable practices with respect to how such practices should look like (Anderson, 2005; Livesey, 2002; Parkinson and Howorth, 2008; Prasad and Elmes, 2005), arguing that sustainable development “represents a space of dissention and sociopolitical struggle” within which the two competing logics (frames or discourses) of unabated economic growth and environmental stewardship come together (Livesey, 2002, p. 316).

In the same vein, entrepreneurship and management researchers increasingly seek to de-reify entrepreneurship and examine its embeddedness within societal structures (Bruni et al., 2004; Downing, 2005; Perren and Jennings, 2005; Peterson and Meckler, 2001). In doing so, they challenge the dominant assumption that entrepreneurship involves the undertaking of activities over which individual entrepreneurs have full control (Chell, 2007; Czarniawska and Wolff, 1991) and point to interconnections of entrepreneurial practices with broader societal and cultural expectations of what entrepreneurs should look like or do (Bruni et al., 2004; Nicholson and Anderson, 2005). Similarly, researchers increasingly seek to expose the forces of domination inherent in enterprise discourse and argue that entrepreneurship may have taken a special position in capitalist societies by providing a normative prescription of how entrepreneurs should interrelate with important institutions in society and one another (Chell, 2007). Thus, far from the purposeful behaviors that are typically associated with entrepreneurship, societal norms about “appropriate” entrepreneurial action may in fact act as a form of domination that provides guidance on how newcomers to a field are to relate to the expectations held by important societal constituencies (Du Gay, 1994, 2008; Salaman and Storey, 2008).

We argue then that the notion of sustainability in the context of entrepreneurship also requires de-reification as a means to understand how the particular practices of sustainable development and environmentally responsible entrepreneurial action become constructed and institutionalized (Jennings and Zandbergen, 1995) in a business field. To this end, we draw from neo-institutional writings and research on institutional logics (Friedland and Alford, 1991; Misangyi et al., 2008; Thornton and Ocasio, 2008) to examine the intrinsic interplay between the logics of “sustainability” and “profitability” on the one hand and the societal context in which entrepreneurial practice takes place on the other.

We conceptualize sustainable development to include issues such as the stimulation of products, processes, and policies that reduce energy consumption and waste generation; the use of ecologically sustainable resources; or the implementation of an environmental management systems (Redclift, 2000)—more generally, the reduction of a company’s “ecological footprint” (Bansal and Roth, 2000; Hart, 1997). Furthermore, we contend that the two logics of sustainability and profitability inevitably appear in every field, though expectations about the appropriate balance between them may vary (Banerjee et al., 2003; Jennings and Zandbergen, 1995). In doing so, we acknowledge both the embeddedness and agency inherent to sustainable development, in that the logics of sustainability and profitability are available to entrepreneurs as both institutional constraints and strategic resources (Battilana, 2006; Lawrence and Suddaby, 2006; Meyer and Hammerschmid, 2006).

In short, we present sustainable entrepreneurship as an enactment of multiple logics (Chia and Holt, 2006; Kraatz and Block, 2008; Reay and Hinings, 2005), whose manifestation combines (1) entrepreneurs’ adherence to field-prescribed expectations about the appropriate

balance between the logics and (2) the strategic process of classifying practices in accordance with the logic demanded by entrepreneurs' own interests and those of their stakeholders.

2. Sustainable development and institutional logics

2.1. Multiplicity of logics

To examine the role of sustainable development in entrepreneurial practice, we first acknowledge entrepreneurs' confrontation with multiple demands when entering a field.² As noted previously, we focus on those individuals who are newcomers to a field (Pe'er and Vertinsky, 2008). These newcomers arguably encounter severe challenges in demonstrating "appropriate" behavior in the eyes of field incumbents (Aldrich, 1999), yet their lack of "institutional embeddedness" may also increase their ability to navigate field incumbents' demands in creative ways (Battilana, 2006). We conceive of these demands as institutional logics or the socially constructed belief systems that act as cognitive frames that enable entrepreneurs to make sense of the reality in which they operate (Friedland and Alford, 1991). More generally, institutional logics provide actors with an arsenal of taken-for-granted categories and organizing principles by which they select and implement courses of action (Thornton and Ocasio, 1999), categorize other actors (Mohr and Duquenne, 1997), and determine which actions are appropriate in particular settings (Spicer, 2006). Thus, institutional logics provide arrangements for exercising field-level power and authority (Friedland and Alford, 1991; Thornton and Ocasio, 2008).

Institutional logics literature recognizes that actors often deal with *multiple* logics, which shape the internal dynamics of organizational fields. Whereas some researchers examine how

² The notion of *field* captures a broader set of issues than an industry in that it highlights the inter-relations among not only buyers, suppliers, and competitors but also a variety of actors that exert pressure on one another (e.g., governments, NGOs, lobbying groups); as such, it is more akin to a battlefield, wherein actors negotiate meaning and compete for superior positions (Bourdieu, 1998; Fligstein, 1996). Yet the notion also can be used as a lens to analyze an industry (Reay and Hinings, 2005; Wooten and Hoffman, 2008), as we use it throughout the paper.

such multiple logics may conflict, such that the associated instability brings about change as one logic dominates others (Lounsbury, 2002, 2007; Thornton and Ocasio, 1999), other work acknowledges the possibility of coexisting, multiple logics within a field (Kraatz and Block, 2008; Thornton and Ocasio, 2008). For instance, Thornton and colleagues (2005) observe an ongoing, unresolved tension between aesthetic and efficiency logics in architecture, and Kitchener (1999) describes the emergence of a hybrid logic in the U.K. healthcare system. Furthermore, Reay and Hinings (2005) find that even as the Alberta health care system shifted from a dominant medical professionalism to a business-like healthcare logic, medical professionalism remained strongly embedded in some sectors of the field and still guided the actions of a significant portion of actors. Thus, they argue that a new logic does not simply replace the old one, nor do the logics necessarily form a new hybrid logic; rather, an uneasy truce arises between the two, and the previously dominant logic remains strongly present in the field.

We draw from this research into the multiplicity of institutional logics by considering how entrepreneurs cope with the permanent embeddedness of the logics of “sustainability” and “profitability” that increasingly characterize organizational fields (Colby, 1991; Jennings and Zandbergen, 1995; Jermier et al., 2006; Olsen et al., 1992). By acknowledging the plurality of these two logics in every field, we raise the question of how entrepreneurs navigate the space between them.

2.2. The logics of sustainability and profitability

The contemporary emphasis on sustainable development brings to the forefront various issues such as recycling, energy conservation, and the preservation of natural resources; it also has substantial effects on government actions by introducing and enforcing new legal definitions of the relationship of business with the natural environment (Dunlap and Mertig, 1992).

Accordingly, entrepreneurs increasingly must attend to the expectations of other actors—governments, investors, customers, public opinion, and so on—if they hope to act within the model of sustainability and help achieve some balance between ecological and economic concerns (Daly and Cobb, 1994; Jennings and Zandbergen, 1995; Schaper, 2002). Furthermore, advocates of sustainability tend to believe in grassroots activity, such that individual organizations and entrepreneurs play pioneering roles by fusing sustainable technologies into business practices (Bramwell, 1989; Egri and Frost, 1994). Because of the uncertainty surrounding their endeavors though, entrepreneurs face the challenge of attaining external validation of the “appropriate amount” and truthfulness of their sustainable practices, in the eyes of their field’s constituencies (Cho, 2006; Paton, 2003). For instance, entrepreneurs must conform with the dominant narratives of what sustainable practices should look like (Parkinson and Howorth, 2008) and demonstrate that their sustainable practices match shared conceptions of what such practices entail, according to important stakeholders (Aldrich, 1999; Mitchell et al., 1997). We label these belief systems of field incumbents that get imposed on entrepreneurs entering a field the “sustainability logic.”

A second set of expectations imposed on entrepreneurs demands that their endeavors be economically viable and bring something valuable to the field. This logic, the “profitability logic,” is consistent with the widespread association of entrepreneurship with value creation and innovation (Schumpeter, 1934) and the belief in entrepreneurs’ alertness to previously overlooked economic opportunities (e.g., Kirzner, 1973; Shane and Venkataraman, 2000). The very notion of entrepreneurship fundamentally implies an expectation of the profitable exploitation of products, technologies, or markets that hitherto have been overlooked by field incumbents (Shane and Venkataraman, 2000). Thus, according to claims that “organizational

emergence is, at its core, about variation [, as] each emerging organization is different from all previous organizations” (Gartner, 1993, p. 236), we include the expectation that entrepreneurs successfully impose their “vision” of economic improvements onto existing business practices in the field as a second important belief system with which entrepreneurs must cope. The ability to convey the image that the entrepreneur provides valuable economic outcomes, in the eyes of stakeholders, may capture the very core of the mythology of entrepreneurship (Nicholson and Anderson, 2005).

Extant research provides no conclusive evidence regarding whether the logics of sustainability and profitability are complementary or conflicting. Some researchers suggest a trade-off between the goals of environmental protection and economic competitiveness (Colby, 1991; Jaffe et al., 1995; Palmer et al., 1995), noting the inherent challenge of, for example, convincing investors about the benefits of sustainable practices because of the ambiguity regarding the financial success of such practices (Surma and Vondra, 1992). In contrast, market failures with respect to environmental stewardship may present opportunities for entrepreneurs to create radically new technologies (Cohen and Winn, 2007) and achieve profitability (Dean and McMullen, 2007). We do not intend to weigh in on this issue but instead start from the premise that sustainability and profitability represent different logics, increasingly embedded in most fields (Jennings and Zandbergen, 1995; Jermier et al., 2006), and that entrepreneurs must deal with them. We also acknowledge that each field, and its incumbents, may have specific expectations about what represents an “appropriate” balance. Sustainable business practices are defined and understood differently across industries (Livesey and Kearins, 2002), and industries vary in their perceived influence on the environment, such that banking, financial services, or insurance, for instance, generally appear to have minimal environmental impact (Kolk et al.,

2001), whereas others such as oil, metal, and automotive industries are perceived to have greater environmental impact (Banerjee et al., 2003) or are “environmentally sensitive” (Jose and Lee, 2007). Furthermore, within a particular field, some actors may favor only the profitability logic (e.g., banks), while others may favor the sustainability logic (e.g., environmental watch-dog groups), and yet others may favor a mix of the two (e.g., professional associations).³

2.3. Balance of institutional logics as driven by a field's doxa

On the basis of the preceding discussion, we consider the socially embedded mechanisms through which entrepreneurs cope with the permanent presence of the sustainability and profitability logics and theorize about how they might navigate the space between them. To be more precise, given the presence of multiple logics in a field, we argue it is important to consider how entrepreneurs might both adhere to and selectively draw from these two logics to advance their own interests in the field (Meyer and Hammerschmid, 2006; Reay and Hinings, forthcoming). In this sense, we conceive of these logics as possible constraints on behavior, as well as resources from which they can draw.

A noted social theorist, Pierre Bourdieu, points to the possibility that some field-specific knowledge is institutionalized as commonsensical or “doxic,” in that it conceives of certain behavior as normal or “legitimate” in the eyes of the dominant actors (Bourdieu, 2000). The term “doxa” is akin to the presence of a “right, correct, dominant vision which has more often than not been imposed through struggles against competing visions” (Bourdieu, 1998, p. 56). For the purposes of this study, doxa refers to the field-prescribed norms of the balance that actors should strike between the logics of sustainability and profitability. For example, some fields (e.g., oil industry) may dictate that the profitability logic dominates, whereas others (e.g., food industry)

³ Our focus is not on which logic may motivate an individual entrepreneur but rather which logic is demanded of that entrepreneur by a particular set of actors.

adopt the sustainability logic more prominently, inasmuch as they need to do so to avoid punitive government actions (Banerjee et al., 2003; Jermier et al., 2006). In other words, we argue that every field contains doxic (i.e., taken-for granted and deeply entrenched) expectations about the balance between the two logics.

In the following sections, we develop two sets of arguments, as we show in Figure 1. First, we highlight the socially embedded nature of the deployment of logics by noting several factors that shape and constrain the ways that entrepreneurs deploy and combine the sustainability and profitability logics. Specifically, we consider how entrepreneurs' adherence to field-prescribed norms or doxa with respect to the balance between the two institutional logics may be influenced by (1) the number of the fields to which the entrepreneur previously has been exposed, (2) the dominance of these fields relative to the field entered, and (3) the permeability of the field entered. Second, we highlight the selective and power-laden ways in which entrepreneurs deploy the two logics through a process of classification. We specifically consider the role of (1) entrepreneurs' strategic objectives, (2) stakeholder interests, and (3) the acclaimed superiority and inferiority of particular logics.

Insert Figure 1 about here

3. Adherence to field-prescribed doxa

Entrepreneurs' prior exposure to *other* fields relates in important ways to their adherence to the doxa of the field they currently enter, with respect to the balance between the sustainability and profitability logics. This argument corresponds to the widely acclaimed connection between entrepreneurs' previous careers and experiences and the social systems in which they are embedded (e.g., Baum and Dutton, 1996; Dacin et al., 1999; Watson, 2000). To be precise,

entrepreneurs' previous experiences may serve as a powerful conduit for incorporating broader social conditions into their ventures' practices and strategy (Boeker, 1988). We deem two field characteristics of the field(s) to which the entrepreneur previously has been exposed as particularly influential over his or her adherence to the entrenched norms and expectations of the field entered: the number of fields and their relative dominance.

3.1. Number of previous fields

To the extent that entrepreneurs previously have been exposed to *fewer* fields, they likely have gained less insight into how fields vary with respect to the balance between the sustainability and profitability logics (Friedland and Alford, 1991; Jermier et al., 2006); therefore, they may be more willing to accept the incumbents' expectations about the appropriate balance in the field they enter. In this regard, we again note that different fields balance profitability and sustainability in different ways. Because some industries' activities affect the environment more than do others' (Banerjee et al, 2003), they likely adopt different degrees of emphasis on sustainability versus profitability. Clarke and Gibson-Sweet (1999) survey the corporate social disclosures of the top 100 U.K. companies and find variance in the percentage of companies in different industries that emphasize environmental issues, such that 100% of conglomerates, food manufacturers, and stores; 80% of brewers and distillers; 75% of health and household goods; and 50% of banks and building materials and services industries report environmental issues. Similarly, Kolk (2003) finds significant variations in the amount of sustainability reporting across industry sectors. Although environmental reporting sometimes must be taken with a grain of salt in terms of its reflection of companies' true practices (Jermier et al., 2006; Kolk, 2003), these differences provide some indication of the variation in salience of the two logics across different fields. Therefore, an entrepreneur who previously has been active in fewer fields likely

does not have a good grasp of how different fields may balance the sustainability and profitability logics differently. This lack of insight should make the entrepreneur more likely to accept any prescription by field incumbents about what constitutes an appropriate balance of the two logics as doxic (Battilana, 2006; Cliff et al., 2006).

3.2. Dominance of previous fields

Bourdieu and Wacquant (1992) note that fields are hierarchically related, and some fields dominate others. For instance, fields with a dominant economic logic may dominate fields with dominant educational or artistic logics (e.g., Oakes et al., 1998), though the reverse also might occur, as in the case of high art, in which context the economic logic gets repressed and stigmatized (e.g., Bourdieu, 1983, 1998). Extant research further reveals that certain fields (e.g., in the public sector) tend to model themselves after other fields (e.g., for-profit sectors, Du Gay, 1994, 2004; Mueller et al., 2003; Thomas and Davies, 2005), which means that the former fields are dominated or colonized by the latter (Bourdieu, 1983, 1998). In our research context, field dominance reflects the field's ability to defend itself against encroachments by other fields or extra-field actors with respect to sustainability concerns. Fields that are able to impose their rules on other fields are more dominant than are fields that are more easily subjected to the whims of other fields or actors, such as governments (Bourdieu, 1998). For example, the oil industry has been more successful in limiting or thwarting government and public oversight than have the tobacco or pharmaceutical industries, which makes it a more dominant field (Livesey and Kearins, 2002).

We argue in turn that an entrepreneur who previously has been active in a *dominated* field and enters a more dominant field is likely to adhere to field-prescribed expectations about how much weight to give to the sustainability and profitability logics. Dominant narratives about

how to do business (e.g., the extent to incorporate sustainable practices into business operations) typically get imposed and maintained by high-status actors (DiMaggio and Powell, 1983), who benefit from reinforcing existing practices and are less likely to disturb them (Fligstein, 1996; Greenwood and Suddaby, 2006; Leblebici et al., 1991). By virtue of their prior experience in a dominated field, such entrepreneurs likely have been exposed to the doxa of more dominant fields, because by definition, the doxa of the latter has permeated the former field (Oakes et al., 1998). Consequently, the doxic assumptions of a dominant field with respect to the balance between sustainability and profitability should appear less foreign to an entrepreneur entering such a field, and the entrepreneur may be more prone to internalize them.

3.3. Permeability of field entered

In addition to the characteristics of the fields to which the entrepreneur previously has been exposed, we consider a characteristic of the field entered, namely, the permeability of its boundaries, which varies from field to field (Bourdieu, 1998; Bourdieu and Wacquant, 1992). Bourdieu argues that fields generally strive for the greatest autonomy possible to achieve the discretion to dole out rewards and punishments. Thus, to the extent that a field succeeds in insulating itself from other fields, its incumbents should be better able to impose their preferences on newcomers entering the field. An important characteristic that may contribute to the permeability of a field's boundaries is the degree of public concern about the field. Fields such as tobacco and alcohol, which are perceived as having significant public consequences, may attract more government oversight, nongovernmental organizational activity, and other external interventions (Jermier et al., 2006), in which case their incumbents should be less able to impose their will unilaterally on entrepreneurs entering the field. In contrast, fields that attract less public

scrutiny and government oversight can more easily reduce entrepreneurs' perceived flexibility for striking an appropriate balance between the two logics.

Another important characteristic associated with the permeability of a field's borders may be its maturity. Institutional writings argue that as a field matures, it tends to institutionalize certain modes of behavior (DiMaggio and Powell, 1983), such that over time, state intervention, competition, and professions drive the actors operating in that particular field to become increasingly similar in terms of how much they attend to different logics (DiMaggio and Powell, 1983; Meyer and Rowan, 1977). For instance, Egri (1993, cited in Jennings and Zandbergen, 1995) demonstrates that in the early phases of organic farming in British Columbia, the field was characterized by a diversity of practices, but it gradually organized around supplying a predetermined market and guaranteeing the quality of products. Consequently, the field gradually professionalized, institutionalizing a set of practices expected of actors entering the field. It thus follows that entrepreneurs should be more likely to follow the lead of field incumbents in terms of the balance between sustainability and profitability in more mature fields, whose scripts and norms about appropriate practices are more likely to be well established (Utterback, 1994).

Ultimately, entrepreneurs entering a field with less permeable boundaries experience the field's doxa more powerfully and are more prone to adhere to the expectations about the balance between the two logics that the field incumbents impose.

4. Selective deployment of institutional logics

In addition to emphasizing the socially embedded nature of entrepreneurs' attempts to balance the logics of sustainability and profitability, we acknowledge that when confronted with these two logics, entrepreneurs can advance their interests through a process of *classification*

(DiMaggio, 1997), whereby they selectively align their practices with the field's doxic norms and expectations about the "appropriate" balance. We enrich literature that emphasizes the agency inherent in entrepreneurial action (Schumpeter, 1934; Shane and Venkataraman, 2000) as we relate such agency with the power struggles that take place between the entrepreneur and field incumbents (Oakes et al., 1998; Reay and Hinings, 2005). In doing so, we provide an alternative perspective of institutional logics, not only as field-imposed constraints (Friedland and Alford, 1991), but also as resources by which to gain and maintain power. In other words, to advance their interests, entrepreneurs may attempt to balance the two logics in a strategic and selective manner (Kraatz and Block, 2008). An illustration of this argument emerges from the culinary field, in which cooks selectively draw on the logics of profession, art, business, and labor to make sense of themselves as workers and to guide their interactions with others (Fine, 1996). In theorizing about how entrepreneurs may selectively classify their practices as complying with the sustainability and profitability logics, we consider several aspects of such classification work.

4.1. Strategic objectives

First, in the presence of multiple logics (Reay and Hinings, 2005; Thornton et al., 2005), entrepreneurs can advance their interests by classifying their practices as aligning with the logic that best reflects their strategic objectives. An example, also drawn from the culinary field, is Rao and Giorgi's (2006) discussion of celebrity chef Ferran Adria, who pioneered "techno-cuisine" and successfully matched, across time, his strategic objectives with different logics in the culinary field. Although his initial objective was to categorize his practices as broadly fitting in with the dominant logic of nouvelle cuisine, he developed an innovative style that aimed to realize a radical departure from the practices employed by nouvelle cuisine chefs. More

precisely, he incrementally associated his practices with the novel logic of techno-cuisine, and in doing so, he shielded himself from criticism by field incumbents that he was subverting the existing norms of nouvelle cuisine and defying the dominant logic. Furthermore, in their institutional analysis, Munir and Phillips (2005) show how Kodak used a variety of rhetorical tools to institutionalize new meanings for roll-film technology as a camera for regular people, intended to capture and preserve their special moments.

Similarly, in the context of sustainability, the deployment of a category such as “green” business arguably reflects a political move that reflects actors’ strategic objective to stand out in the field with respect to being a frontrunner on environmental issues (Jermier et al., 2006; Lamont and Molnár, 2002). Furthermore, socially responsible mutual fund companies build their identities among investors by simultaneously positioning themselves as similar to conventional mutual funds, thereby creating a sense of familiarity and credibility with respect to the profitability logic, while also differentiating themselves by tapping into the investors’ desire to bring about positive social change and appealing to sustainability concerns (Markowitz, 2007). Ultimately, since maintaining consistency between strategic objectives and day-to-day business practices is a matter of survival for newcomers to a field (Aldrich, 1999; Stinchcombe, 1965), we expect a close alignment between the extent to which entrepreneurs’ strategic objectives include sustainability issues and their contestation of the “typical” field-prescribed balance between sustainability and profitability concerns.

4.2. Stakeholder interests

Second, since in fields with multiple logics, incumbent actors may balance the logics in different ways (e.g., Hardy et al., 2000; Leca and Naccache, 2006; Reay and Hinings, 2005), entrepreneurs may have to classify their practices as consistent with a particular logic for the

benefit of one actor (e.g., emphasizing profitability to shareholders) but also satisfy another actor that favors another logic (i.e., emphasizing sustainability to government). Accordingly, entrepreneurs can advance their interests in the field to the extent that they artfully adapt their practices and stories across stakeholders. Thus, the fair trade movement demonstrates the need to strike a balance between the activism sentiment of consumers and volunteers who emphasize the sustainability logic and business partners' need to use the fair trade initiatives to comply with the demands of the profitability logic (Baker and Sinkula, 2005; Wilkinson, 2007).

In the same vein, entrepreneurs can advance their interests by invoking specific impressions among different target audiences through reports, advertising, and Web sites and thereby be selective regarding which issues they report on or ignore (Parkinson and Howorth, 2008; Roberts, 2003; Weaver et al., 1999). In this sense, they may benefit from attending differently to the interests of different actors (Mitchell et al., 1997). For instance, entrepreneurs may emphasize sustainability issues for those customers who are highly aware of environmental issues, who in turn prefer to buy from the entrepreneur who supports their values (Collins et al., 2007). Similarly, entrepreneurs' emphasis of the value-added benefits of acting as an environmentally responsible actor may be instrumental with particular investors but not others, so they attend to both social and financial criteria (Armour et al., 2003). Entrepreneurs also may engage in "auto-communication" (Morsing, 2006), in that some messages about sustainability sent to external audiences actually are aimed at specific employees who require convincing that their company is working for the common good rather than at the expense of others, which can enhance employee identification and commitment (Carroll and Buckholtz, 2000).

4.3. Acclaimed superiority or inferiority of logics

Another mechanism of classification is the framing of particular logics themselves as superior or inferior (Hardy and Phillips, 2004; Lamont and Molnár, 2002). That is, entrepreneurs can advance their interests in the field by emphasizing their superiority in enacting the logic that they deem themselves most capable of successfully enacting, while emphasizing the inferiority of the logic they deem themselves least capable of enacting.

By emphasizing their ability to “outperform” others in enacting their preferred logic, entrepreneurs can claim higher status as a function of their superior enactment. For example, The Body Shop (Livesey and Kearins, 2002) and Green Mountain Coffee Company (Baker and Sinkula, 2005) seek to convey their superior enactment of sustainability logics to consumers to differentiate themselves from competitors. Thus, an important mechanism through which entrepreneurs can advance their interests is their purposeful reference to their superiority in enacting a particular logic. Alternatively, in the presence of multiple logics in a field, entrepreneurs may define their practices and identities in opposition to the logic for which they are poorly positioned. That is, they may seek to affirm the logic that they see as advantageous by repressing the opposing logic and its underlying assumptions, which otherwise could undermine their own claims (Billig, 2001; Deetz, 1992). They may even undertake explicit attacks on the logic they have difficulty enacting. For example, entrepreneurs who are poorly positioned to enact the sustainability logic—perhaps because of their lack of exposure to and experience with sustainable practices—may seek to delegitimize that logic, whereas entrepreneurs unable to make a profit may attempt to attack the goal of “making profit at any expense.”

5. Conclusions

5.1. Summary and contributions

Extant research emphasizes the need for entrepreneurs to fit into broader social and ecological systems in such a way that they contribute to sustainability (Daneke and Lemak, 1985; Hall and Vredenburg, 2007; Jermier et al., 2006); consequently, entrepreneurship and small business literature increasingly acknowledges the need to consider both sustainability and profitability issues in entrepreneurial practices (Cohen and Winn, 2007; Dean and McMullen, 2007; Schaper, 2002). Yet despite widespread acknowledgment that the role of sustainability in entrepreneurial activity relates intrinsically to the broader societal context in which this activity takes place (Austin et al., 2006; Jennings and Zandbergen, 1995; Peredo and McLean, 2006), extant research may not have fully captured the socially embedded nature of what constitutes appropriate and desirable practices in terms of balancing sustainability and profitability (Parkinson and Howorth, 2008). To fill this gap, we draw from institutional logics literature (e.g., Friedland and Alford, 1991) to reconceptualize entrepreneurs' efforts to balance sustainability and profitability concerns as an essentially power-infused process that includes elements of both embeddedness and agency (Holm, 1995; Seo and Creed, 2002). The study of multiple logics has received increasing attention in institutional theory (Thornton and Ocasio, 2008), yet its application to the domain of entrepreneurship remains sparse (Misangyi et al., 2008) and therefore presents, we believe, a novel perspective for highlighting the dialectical relationship between entrepreneurial practice and institutional expectations about sustainable development.

First, we conceive of entrepreneurs' balancing of the two institutional logics as shaped by their ongoing interactions with field incumbents. In this regard, our arguments match literature that attests to the importance of gaining legitimacy (e.g., Aldrich, 1999; Aldrich and Fiol, 1994) and the association of this legitimacy with entrepreneurs' conformance with field-incumbent expectations about appropriate behavior in a given field. As Scott (1995) points out, legitimacy

captures the extent to which social actors conform to regulatory or legal pressures, a shared sense of value or expectation, or socially constructed categories of meaning. Similarly, entrepreneurs' adherence to both the sustainability and profitability logics—and their maintenance of an “appropriate” balance between the two—reflects the embeddedness of entrepreneurs in a web of expectations. We extend this argument by suggesting that entrepreneurs are complicit in the very manifestation of these expectations based on their previous careers and the experiences and associated social beliefs systems to which they have been exposed (Baum and Dutton, 1996; Dacin et al., 1999).

Second, we conceive of institutional logics as not only constraints on entrepreneurs' actions but also resources by which entrepreneurs can advance their interests through a process of classification (Thornton and Ocasio, 2008). We focus particularly on how entrepreneurs may actively classify their practices as complying with the logic(s) that is most favorable to field incumbents and carve out a unique competitive position in the field. They thus can maintain a specific balance between the two, depending on the demands of particular stakeholders and their relative positioning compared with competitors. We might go even further and argue that entrepreneurs' successful enactment of a particular logic, especially the sustainability logic, relates intrinsically to the very presence of the opposing logic, similar to arguments advanced in identity-based politics, whereby actors define themselves in opposition or juxtaposition to others (Glynn, 2000; Rao et al., 2005; Sampson, 1993). Sampson (1993) argues that practices inevitably must be described not in absolute terms but instead in relation to an *absent standard*. Thus, the sustainability logic can be meaningful only when contrasted with the profitability logic (Eikhof and Haunschild, 2007; Glynn and Lounsbury, 2005). Entrepreneurs' classification of their practices as fitting in with a particular logic, in juxtaposition with the demands of another logic,

thus appears particularly salient when the presence of multiple logics does not necessarily lead to the replacement of one logic with another—as is the case for sustainability and profitability (Jennings and Zandbergen, 1995; Jermier et al., 2006)—but instead marks an ongoing struggle, in which entrepreneurs and incumbent actors vie for power while navigating the space between different logics (Wetherell and Potter, 1992). To gain power and capture a temporary advantage in competition with others, entrepreneurs can benefit from invoking an absent standard against which their own and others’ practices are assessed (Sampson, 1993).

5.2. Future research

The arguments developed herein pertain mostly to a limited time period, that is, the time at which the entrepreneur enters the field or shortly thereafter. Future research could elaborate on the dynamic nature of the proposed model. In particular, entrepreneurs’ practices that at one point in time are perceived as highly sustainable but not economically viable could evolve into economic successes if the adoption of sustainable practices becomes the “new accepted norm” within the field (Lawrence et al., 2001). Environmentally friendly endeavors might prove highly successful in a field over time (Cohen and Winn, 2007; Dean and McMullen, 2007) and make incumbent actors, even those with a primary concern for profitability, realize that they must adopt sustainable practices to ensure the field’s long-term survival (Haunschild and Chandler, 2008). Consequently, shifts might occur in the field’s existing structure, which would enable sustainable activities or practices to gain more weight in the “appropriate” balance between sustainability and profitability. We note that this dynamic relationship between the sustainability and profitability logics may result not only from highly contested battles waged by entrepreneurs against previously dominant institutional arrangements (Seo and Creed, 2002) but also from the acceptance among field incumbents that sustainable practices can benefit the field as a whole and

its players. Thus, the process by which sustainable practices gain impetus may reflect an ongoing confrontation between the field's current power structures and the criteria used to judge sustainable practices as beneficial (Fligstein, 1996; Lawrence et al., 2001).

An empirical investigation of our proposed framework would need to bridge multiple levels of analysis. Bourdieu, who guided our conceptualization of the notions of field and doxa (Bourdieu, 1998; 2000), offers important insights that can benefit entrepreneurship and management research (Everett, 2002; Ozbilgin and Tatli, 2005). For instance, he resisted treating different levels of analysis as separate (Bourdieu and Wacquant 1992) and found such separation artificial and problematic. Similarly, our proposed framework is essentially a meso-level one (Cooke et al., 2005), in that it operates at the interface of the macro level (e.g., the field the entrepreneur enters) and the micro level (e.g., the entrepreneur's practices) and treats these levels as not only interconnected but also mutually constitutive (cf. Chia and Holt, 2006; Seo and Creed, 2002). Consequently, empirical research exploring our propositions should attend to those aspects related to both the individual entrepreneur and the macro-context in which the entrepreneur is embedded. Furthermore, empirical work based on the proposed framework would lend itself to both qualitative and quantitative research methods, similar to Bourdieu's (1984) own extensive quantitative and ethnographic research. In this sense, the proposed framework may provide a fruitful platform for empirical research endeavors centered on sustainable entrepreneurship. For example, research might use qualitative methods to examine, in situ, how entrepreneurs navigate the potentially conflicting demands of various actors (cf., Meyer and Hammerschmid, 2006; Reay and Hinings, forthcoming). It could also use surveys and other quantitative methods to assess, for instance, how entrepreneurs' beliefs about proper behavior in various situations or their social status or network centrality contribute to their decision to either

adhere to or challenge field-prescribed norms about balancing the logics of sustainability and profitability.

5.3. Implications

From a practitioner perspective, our arguments implicitly suggest that through their own activities—such as emphasizing the sustainability of their products depending on specific stakeholder concerns—entrepreneurs can proactively work to classify their practices in ways that enable them to meet the simultaneous demands of different actors in their field. The argument that institutional logics may come to represent resources through a process of classification also points to the need for entrepreneurs to be aware of the political nature of classifications used by field incumbents (see also Rao, 1994; Rao and Giorgi, 2006; Reay and Hinings, 2005).

Entrepreneurs should realize that various actors in the field might attempt to protect not only their existing market share but also the meaning system that privileges their interests (Fligstein, 1996; Zilber, 2008). Thus, entrepreneurs must not only weigh the pros and cons of engaging in the practices expected by incumbent actors, from a utilitarian point of view, but also understand the politics involved in the process of defining appropriate behavior with respect to sustainability and profitability concerns. The appreciation of the contested nature of the process of classifying practices as sustainable in a particular field ultimately should facilitate entrepreneurs' success in carving out successful positions and assist them in developing effective political strategies (Fligstein, 1997), alongside the development of sound business ideas.

REFERENCES

- Aldrich, H.E. (1999). *Organizations Evolving*. London: Sage.
- Aldrich, H., Fiol, M. (1994). Fools rush in? The institutional context of industry creation. *Academy of Management Review* 19, 645-670.
- Allan, K. (2006). *Contemporary Social and Sociological Theory*. Thousand Oaks, CA: Pine Forge Press.
- Anderson, A. R. (2005). Enacted metaphor: the theatricality of the entrepreneurial process. *International Small Business Journal* 23, 585–603.
- Armour, J., Deakin, S., Konzelmann, S.J. (2003). Shareholder primacy and the trajectory of UK corporate governance. *British Journal of Industrial Relations* 41, 531–555.
- Austin, J. E. (2006). Three avenues for social entrepreneurship research. In J. Mair, J. Robinson, and K. Hockerts, eds., *Social Entrepreneurship*, Basingstoke: Palgrave Macmillan.
- Baker, W.E., Sinkula, J.M. (2005). Environmental marketing strategy and firm performance: Effects on new product performance and market share. *Journal of the Academy of Marketing Science* 33, 461-475.
- Banerjee, S.B., Iyer, E.S., Kashyap, R.K. (2003). Corporate environmentalism: Antecedents and influence of industry type. *Journal of Marketing* 67, 106-122.
- Bansal P., Roth K. (2000). Why companies go green: a model of ecological responsiveness. *Academy of Management Journal* 43(4), 717–736.
- Battilana, J. (2006). Agency and institutions: The enabling role of individuals' social position. *Organization* 13(15), 653-676.
- Baum, J.A.C., Dutton, J.E. (1996). The embeddedness of strategy. *Advances in Strategic Management* 13, 1-15.

- Billig, M. (2001). Arguing. In W.P. Robinson, & H. Giles (Eds.), *The New Handbook of Language and Social Psychology*. Chichester, UK: John Wiley and Sons, 241-251.
- Boeker, W. (1988). Organizational origins: entrepreneurial and environmental imprinting at the time of founding. In: G.R. Carroll, ed., *Ecological Models in Organizations*. Cambridge, MA: Ballinger, 33-51.
- Bornstein, D. (2004). *How to change the world: Social entrepreneurs and the power of new ideas*. Oxford: Oxford University Press.
- Bouchikhi, H. (1993). A constructivist framework for understanding entrepreneurship performance. *Organization Studies* 14(4), 549-570.
- Bourdieu, P. (1977). *Outline of Theory of Practice*. Cambridge: Cambridge University Press.
- Bourdieu, P. (1983). The field of cultural production, or: the economic world reversed. *Poetics* 12, 311-356.
- Bourdieu, P. (1984). *Distinction: A Social Critique of the Judgment of Taste*. Cambridge, MA: Harvard University Press.
- Bourdieu, P. (1998). *Practical Reason: On the Theory of Action*. Cambridge: Polity Press.
- Bourdieu, P., Wacquant, L. (1992). *An Invitation to Reflexive Sociology*. Cambridge: Polity Press.
- Bramwell A. (1989). *Ecology in the Twentieth Century: a History*. Yale University Press: London.
- Bruni, A., Gherardi, S., Poggio, B. (2004a). Doing gender, doing entrepreneurship: an ethnographic account of intertwined practices. *Gender, Work and Organization* 11, 406-429.
- Bruni, A., Gherardi, S. Poggio, B. (2004b). Entrepreneur-mentality, gender and the study of women entrepreneurs. *Journal of Organizational Change Management* 17, 256-268.
- Calhoun, C. (2003). Pierre Bourdieu. In: G. Ritzer, ed., *The Blackwell Companion to Major Contemporary Social Theorists*. Malden, MA: Blackwell, 274-309.

- Carroll, A. B., Buckholtz, A. K. (2000). *Business and Society: Ethics and Stakeholder Management*. Cincinnati: South-Western Publishing.
- Chell, E. (2007) Social enterprise and entrepreneurship: Towards a convergent theory of the entrepreneurial process. *International Small Business Journal* 25(1), 5-26.
- Chia, R., Holt, R. (2006). Strategy as practical coping: a Heideggerian perspective. *Organization Studies* 27(5), 635-655.
- Cho, A. H. (2006). Politics, values and social entrepreneurship: a critical appraisal. In Mair, J., Robinson, J., & Hockerts, K., eds., *Social Entrepreneurship*, Basingstoke: Palgrave Macmillan.
- Clarke, J., Gibson-Sweet, M. (1999). The use of corporate social disclosures in the management of reputation and legitimacy: a cross sectoral analysis of UK top 100 companies. *Business Ethics: A European Review* 8(1), 5-13.
- Cliff, J.E., Devereaux, J., Greenwood, R. (2006). New to the game and questioning the rules: the experiences and beliefs of founders who start imitative versus innovative firms. *Journal of Business Venturing* 21, 633-663.
- Cohen, B., Winn, M. (2007). Market imperfections, opportunity and sustainable entrepreneurship. *Journal of Business Venturing* 22, 29-49
- Colby, M.E. (1991). Environmental management in development. The evolution of paradigms. *Ecological Economics* 3(3), 193-213.
- Collins, C.M., Steg, L., Koning, M.A.S. (2007). Customers' values, beliefs on sustainable corporate performance, and buying behavior. *Psychology & Marketing* 24(6), 555-577.
- Cooke, P., Clifton, N., Oleaga, M. (2005). Social capital, firm embeddedness and regional development. *Regional Studies* 39(8), 1065-1077.

- Dacin, T., Ventresca, M., Beal, B. (1999). The embeddedness of organizations: dialogue and directions. *Journal of Management* 25, 317–356.
- Daly, H. E., Cobb, J.B. Jr. (1994). *For the Common Good: Redirecting the Economy toward Community, the Environment, and a Sustainable future*. Boston: Beacon Press.
- Daneke, G., Lemak, D.J. (1985). Integrating strategic management and social responsibility. *Business Forum* 10 (2-3), 20-25.
- Dean T., McMullen J. (2007). Towards a theory of sustainable entrepreneurship: Reducing environmental degradation through entrepreneurial action. *Journal of Business Venturing* 22, 50-76.
- Dees, J. G. (2001). *The meaning of "Social Entrepreneurship"*. Palo Alto, CA: Stanford University Graduate School of Business.
- Deetz, S. A. (1992). *Democracy in an Age of Corporate Colonialism: Developments in Communication and the Politics of Everyday Life*. Albany, NY: SUNY Press.
- Derksen, L., Gartrell, J. (1993). The social context of recycling. *American Sociological Review* 58, 434-442.
- Dick, P. (2008). Resistance, gender and Bourdieu's notion of field. *Management Communication Quarterly* 21, 327-343.
- DiMaggio, P. (1997). Culture and cognition. *Annual Review of Sociology* 23, 263-287.
- DiMaggio, P., Powell, W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review* 48, 147-160.
- Du Gay, P. (1994). Making up managers: bureaucracy, enterprise and the liberal art of separation. *British Journal of Sociology* 45(4), 655–674.

- Du Gay, P. (2004). Against 'enterprise' (but not against 'enterprise', for that would make no sense). *Organization* 11(1), 37-57.
- Dunlap, R.E., Mertig, A.G. (1992). *American Environmentalism: The U.S. Environmental Movement, 1970-1990*. Philadelphia: Taylor and Francis.
- Egri, C.P., Frost, P.J. (1994). Introduction: Leadership for Environmental and Social Change. *Leadership Quarterly* 5(3/4), 195-200.
- Eikhof, D.R., Haunschild, A. (2007). For art's sake! Artistic and economic logics in creative production. *Journal of Organizational Behavior* 28, 523-538.
- English, J. F. (2005). *The Economy of Prestige: Prizes, Awards, and the Circulation of Cultural Value*. Cambridge, MA: Harvard University Press.
- Essers, C., Benschop, Y. (2007). Enterprising identities: female entrepreneurs of Moroccan or Turkish origin in the Netherlands. *Organization Studies* 28, 49-69.
- Everett, J. (2002). Organizational Research and the Praxeology of Pierre Bourdieu. *Organizational Research Methods* 5, 56-80.
- Fine, G.A. (1996). Justifying work: Occupational rhetorics as resources in restaurant kitchens. *Administrative Science Quarterly* 41, 90-115.
- Fligstein, N. (1996). Markets as politics: A political-cultural approach to market institutions. *American Sociological Review* 61, 656-673.
- Fligstein, N. (1997). Social Skill and Institutional Theory. *American Behavioral Scientist* 40, 397-405.
- Friedland, R., Alford, R.R. (1991). Bringing society back in: symbols, practices, and institutional contradictions. In W.W. Powell and P. DiMaggio (eds.), *The New Institutionalism in Organizational Analysis*. Chicago: University of Chicago Press, 232-263.

- Gartner, W.B. (1993). Words lead to deeds: towards an organizational emergence vocabulary. *Journal of Business Venturing* 8, 231-239.
- Glynn, M.A. (2000). When cymbals become symbols: Conflict over organizational identity within a symphony orchestra. *Organization Science* 11, 285-298.
- Glynn, M. A., Abzug, R. (2002). Institutionalizing identity: symbolic isomorphism and organizational names. *Academy of Management Journal* 45, 267-280.
- Glynn, M. A., Lounsbury, M. (2005). From the critics' corner: Logic blending, discursive change, and authenticity in a cultural production system. *Journal of Management Studies* 42(5), 1031-1055.
- Greenwood, R., Suddaby, R. (2006). Institutional entrepreneurship in mature fields: The big five accounting firms. *Academy of Management Journal* 49, 27-48.
- Hall, J., Vredenburg, H. (2003). The challenge of innovating for sustainable development. *MIT Sloan Management Review* 45(1), 61-68.
- Hardy, C., Palmer, I., Phillips, N. (2000). Discourse as a strategic resource. *Human Relations* 53, 1227-1248.
- Hardy, C., Phillips, N. (2004). Discourse and power. In D. Grant, C. Hardy, C. Oswick, & L. Putnam (eds.), *The Sage Handbook of Organizational Discourse*. London: Sage, 299-316.
- Hart, S. L. (1997). Beyond greening: Strategies for a sustainable world. *Harvard Business Review* 75(1), 66-76.
- Haunschild, P., Chandler, D. (2008). Institutional-level learning: learning as a source of institutional change. In R. Greenwood et al. (eds.), *The Handbook of Organizational Institutionalism*. London: Sage, 624-649.

- Hoffman, A., Ventresca, M. (2002). *Organizations, Policy, and the Natural Environment: Institutional and Strategic Perspectives*. Stanford, CA: Stanford University Press.
- Holm, P. (1995). The dynamics of institutionalization: Transformation processes in Norwegian fisheries. *Administrative Science Quarterly* 40(3), 398-422.
- Jennings, P.D., Zandbergen, P.A. (1995). Ecologically sustainable organizations: An institutional approach. *Academy of Management Journal* 20, 1015-1052.
- Jermier, J., Forbes, L., Benn, S., Orsato, R. (2006). The new corporate environmentalism and beyond: Green politics and critical reflective organizational systems. In S. Clegg, C. Hardy, T. Lawrence & W. Nord (eds.), *Handbook of Organization Studies*, London: Sage.
- Jose, A., Lee, S. M. (2007). Environmental reporting of global corporations: A content analysis based on website disclosures. *Journal of Business Ethics* 72, 307-321.
- Kirtzner, I. (1973). *Competition and Entrepreneurship*. Chicago, IL: University of Chicago Press.
- Kitchener, M. (1999). All fur coat and no knickers: Contemporary organizational change in United Kingdom hospitals. In D. Brock, M. Powell, & C.R. Hinings (Eds.), *Restructuring the Professional Organization: Accounting, Health Care and Law*. New York: Routledge, 183-199.
- Kolk, A. (2003). Trends in sustainability reporting by the Fortune Global 250. *Business Strategy and the Environment* 12, 279-291.
- Kolk, A., Walhain, S., van de Wateringen, S. (2001). Environmental reporting by the Fortune Global 250: Exploring the influence of nationality and sector. *Business Strategy and the Environment* 10(1), 15-28.

- Kraatz, M., Block, E.S. (2008). Organizational implications of institutional pluralism. In R. Greenwood et al. (eds.), *The Handbook of Organizational Institutionalism*. London: Sage, 241-275.
- Lamont, M., Molnár, V. (2002). The study of boundaries in social sciences. *Annual Review of Sociology* 28, 167-95.
- Lawrence, T.B., Suddaby, R. (2006). Institutions and institutional work. In S.R. Clegg, C. Hardy, T.B. Lawrence, & W.R. Nord (eds.), *The Sage Handbook of Organization Studies*, 2d ed.. London: Sage, 213-254.
- Lawrence, T.B., Winn, M.I., Jennings, P.D. (2001). The temporal dynamics of institutionalization. *Academy of Management Review* 26, 624-644.
- Leblebici, H., Salancik, G.R., Copay, A., King, T. (1991). Institutional change and the transformation of interorganizational fields. *Administrative Science Quarterly* 27, 227-242.
- Leca, B., Naccache, P. (2006). A critical realist approach to institutional entrepreneurship. *Organization* 13, 627-651.
- Livesey, S.M. (2002). The discourse of the middle ground: Citizen Shell commits to sustainable development. *Management Communication Quarterly* 15, 313-349.
- Livesey, S.M., Kearins, K. (2002). Transparent and caring corporations? A study of sustainability reports by The Body Shop and Royal Dutch/Shell. *Organization and Environment* 15, 233-258.
- Lounsbury, M. (1998). Collective entrepreneurship: the mobilisation of college and university recycling co-ordinators. *Journal of Organizational Change Management* 11(1), 50-69.
- Lounsbury, M. (2002). Institutional transformation and status mobility: The professionalization of the field of finance. *Academy of Management Journal* 45(1), 255-66.

- Lounsbury, M. (2007). A tale of two cities: competing logics and practice variation in the professionalizing of mutual funds. *Academy of Management Journal* 50(2), 289-307.
- Lounsbury, M., Glynn, M. A. (2001). Cultural entrepreneurship: stories, legitimacy and the acquisition of resources. *Strategic Management Journal* 22, 545–564.
- Low, M.R., Abrahamson, E. (1997). Movements, bandwagons, and clones: industry evolution and the entrepreneurial process. *Journal of Business Venturing* 12, 435-457.
- Markowitz, L. (2007). Structural innovators and core-framing tasks: How socially responsible mutual fund companies build identity among investors. *Sociological Perspectives* 50, 131-153.
- Meyer, J.W., Rowan, B. (1977). Institutionalized organizations; formal structure as myth and ceremony. *American Journal of Sociology* 83, 340-363.
- Meyer, R., Hammerschmid, G. (2006). Changing institutional logics and executive identities. *American Behavioral Scientist* 49, 1000-1014.
- Misangyi, V.F., Weaver, G.R., Elms, H. (2008). Ending corruption: the interplay among institutional logics, resources, and institutional entrepreneurs. *Academy of Management Review* 33(3), 750-770.
- Mitchell, R. K., Agle, B. R., Wood, D. J. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of Management Review* 22, 853–886.
- Mohr, J.W., Duquenne, V. (1997). The duality of culture and practice: Poverty relief in New York City, 1888-1917. *Theory and Society* 26, 305-356.

- Morsing, M. (2006). Corporate social responsibility as strategic auto-communication: On the role of external stakeholders for member identification. *Business Ethics: A European Review* 15(2), 171-182.
- Mueller F., Harvey, C., Howorth, C. (2003). The contestation of archetypes: Negotiating scripts in a UK hospital trust board. *Journal of Management Studies* 40(8), 1971–1995.
- Munir, K., Phillips, N. (2005). The birth of the “Kodak moment”: Institutional entrepreneurship and adoption of new technology. *Organization Studies* 26, 1665-1687.
- Nicholson, L., Anderson, A.R. (2005). News and nuances of the entrepreneurial myth and metaphor: linguistic games in entrepreneurial sense-making and sense-giving. *Entrepreneurship Theory & Practice* 29, 153-172.
- Oakes, L.S., Townley, B., Cooper, D.J. (1998). Business planning as pedagogy: Language and control in a changing institutional field. *Administrative Science Quarterly* 43, 257-292.
- Olsen, M.E., Lodwick, D.G., Dunlap, R.E. (1992). *Viewing the World Ecologically*. Boulder, CO: Westview Press.
- Ozbilgin, M., Tatli, A. (2005). Book review essay: understanding Bourdieu’s contribution to organization and management studies. *Academy of Management Review* 30(4), 855–877.
- Palmer, K., Oates, W.E., Portney, P.R. (1995). Tightening environmental standards: The benefit-cost or the no-cost paradigm? *Journal of Economic Perspectives*, 119-132.
- Parkinson, C., Howorth, C. (2008). The language of social entrepreneurs. *Entrepreneurship and Regional Development* 20, 285-309.
- Paton, R. (2003). *Managing and Measuring Social Enterprises*. London: Sage.
- Peredo, A.M., McLean, M. (2006). Social entrepreneurship: A critical review of the concept. *Journal of World Business* 41, 56-65.

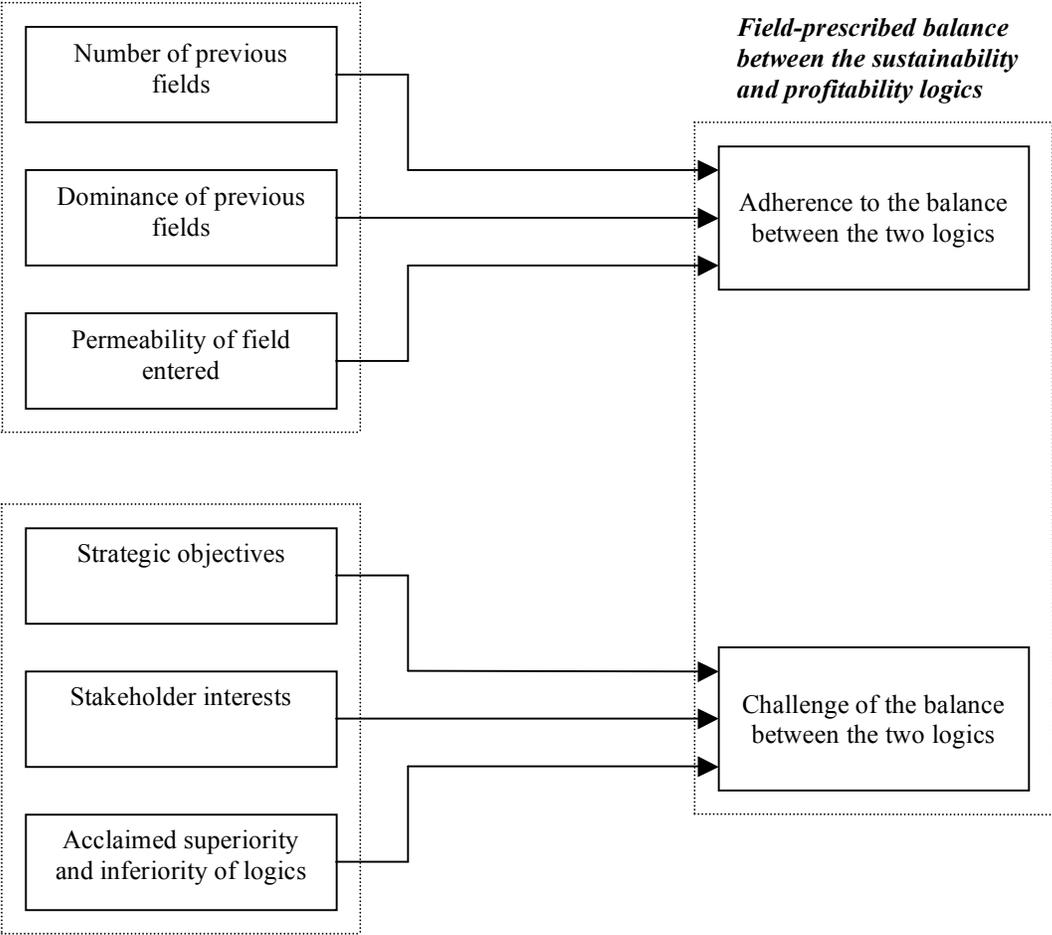
- Pe'er, A., Vertinsky, I. (2008). Firm exits as a determinant of new entry: Is there evidence of local creative destruction? *Journal of Business Venturing* 23(3), 280-306..
- Peterson, M.F., Meckler, M.R. (2001). Cuban-American entrepreneurs: chance, complexity and chaos. *Organization Studies* 22(1), 31-58.
- Prasad, P., Elmes, M. (2005). In the name of the practical: Unearthing the hegemony of pragmatics in the discourse of environmental management. *Journal of Management Studies* 42, 845-867.
- Rao, H. (1994). The social construction of reputation: certification contests, legitimation, and the survival of organizations in the American automobile industry: 1985–1912. *Strategic Management Journal* 15(Special Issue), 29-44.
- Rao, H., Giorgi, S. (2006). Code breaking: how entrepreneurs exploit cultural logics to generate institutional change. *Research in Organizational Behavior* 27, 269-304.
- Rao, H., Monin, P., Durand, R. (2003). Institutional change in Toque Ville: Nouvelle cuisine as an identity movement in French gastronomy. *American Journal of Sociology* 108(4), 795-843.
- Rao, H., Monin, P., Durand, R. (2005). Border crossing: Bricolage and the erosion of categorical boundaries in French gastronomy. *American Sociological Review* 70, 968-991.
- Reay, T., Hinings, C.R. (2005). The recomposition of an organizational field: Health care in Alberta. *Organization Studies* 26, 351-383.
- Reay, T., Hinings, C. R. (in press). Managing the rivalry of competing institutional logics. *Organization Studies*.
- Redclift, M. (2000). *Sustainability: Life chances and livelihoods*. London: Routledge.
- Roberts, J. (2003). The manufacture of corporate social responsibility: Constructing corporate sensibility. *Organization* 10, 249–265.

- Sampson, E.E. (1993). Identity politics: challenges to psychology's understanding. *American Psychologist* 48, 1219-1230.
- Schaper, M. (2002). Small firms and environmental management. *International Small Business Journal* 20(3), 235-249.
- Schumpeter, J.A. (1934). *The Theory of Economic Development*. Cambridge, MA: Harvard University Press.
- Scott, W. R. (1995). *Institutions and Organizations*. Thousand Oaks, CA: Sage.
- Seo, M., Creed, W.E.D. (2002). Institutional contradictions, praxis, and institutional change: a dialectical perspective. *Academy of Management Review* 27: 222-247.
- Shane, S., Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review* 25(1), 217-226.
- Shrivastava, P. (1994). Castrated environment: greening organization studies. *Organization Studies* 15, 705-726.
- Spicer, A. (2006). Beyond the convergence-divergence debate: the role of spatial scales in transforming organizational logic. *Organization Studies* 27, 1467-1483.
- Stinchcombe, A. (1965). *Social structure and organizations*. In J.G. March (Ed.), *Handbook of Organizations*. Chicago: Rand McNally, 142-193.
- Suddaby, R., Greenwood, R. (2005). Rhetorical strategies of legitimacy. *Administrative Science Quarterly* 50, 35-67.
- Surma, J.P., Vondra, A.A. (1992). Accounting for environmental Costs: A hazardous subject. *Journal of Accountancy* 173(3), 51-55.

- Thomas, R., Davies, A. (2005). Theorizing the micro-politics of resistance: New public management and managerial identities in the UK public services. *Organization Studies* 26, 683-706.
- Thornton, P.H., Ocasio, W. (1999). Institutional logics and the historical contingency of power in organizations: executive succession in the higher education publishing industry, 1958- (1990. *American Journal of Sociology* 105(3), 801-843.
- Thornton, P.H., Jones, C., Kury, K. (2005). Institutional logics and institutional change in organizations: transformation in accounting, architecture, and publishing. *Research in Sociology of Organizations* 23, 125-170.
- Thornton, P.H., Ocasio, W. (2008). Institutional logics. In R. Greenwood et al. (eds.), *The Handbook of Organizational Institutionalism*. London: Sage, 99-129.
- Utterback, J.M. (1994). *Mastering the Dynamics of Innovation*. Boston: Harvard Business School Press.
- Van Leeuwen, C., Seguin, G. (2006). The concept of terroir in viticulture. *Journal of Wine Research* 17(1), 1-10.
- Watson, T.J. (2000). *In Search of Management: Culture, Chaos and Control in Managerial Work*, 2d ed. New York: Thomson.
- Weaver, G. R., Trevino, L. K., Cochran, P. L. (1999). Integrated and decoupled corporate social performance: Management commitment, external pressures, and corporate ethics practices. *Academy of Management Journal* 42, 539–552.
- Wetherell, M., Potter, J. (1992). *Mapping the Language of Racism: Discourse and the Legitimation of Racism*. New York: Columbia University Press.

- Wilkinson, J. (2007). Fair trade: dynamic and dilemmas of a market oriented global social movement. *Journal of Consumer Policy* 30, 219-239.
- Wooten, M., Hoffman, A. J. (2008). Organizational fields: Past, present and future. In R. Greenwood, C. Oliver, R. Suddaby, and K. Sahlin, eds., *The Sage Handbook of Organizational Institutionalism*, London: Sage, 130-147.
- Zilber, T. (2002). Institutionalization as an interplay between actions, meanings, and actors: The case of a rape crisis center in Israel. *Academy of Management Journal* 45(1), 234-254.
- Zilber, T. (2008). The work of meanings in institutional processes and thinking. In R. Greenwood, C. Oliver, R. Suddaby, and K. Sahlin, eds., *The Sage Handbook of Organizational Institutionalism*, London: Sage, 151-169.

Figure 1: Conceptual Framework



The Relationship between Social Networks and E-commerce Implementation in the Small Business: The Case Study from Taiwan

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In the perspective of resource-based view, resource portfolio could be considered as a crucial factor for business competition. Due to the specific characteristics of SMEs, e-commerce and social networks could be concerned as two main resources to enhance competitive capability. Thus, this study employs the insights of BarNir and Smith (2002) to explore the owner social networks. Moreover, this study also introduces SBEAM (Small Business EDI Adoption Model) from Iacovou et al. (1995) to explore the e-commerce implementation. Then, this study conducts the exploratory case study to investigate the relationship between owner social networks and e-commerce implementation in the small business context.

Keywords: social networks, e-commerce, case study

Track: 8. Social Entrepreneurship

Exploring challenges in relationship marketing for ethnic minority social enterprises in the United Kingdom

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Introduction

The role of social entrepreneurship within an economy is now being increasingly recognised (Bridge, 2008) and ethnic communities have ultimately bore ethnic social entrepreneurs in the process. This is because charitable and voluntary sector organisations managed by these individuals is making a difference in society and this difference is recognized just like any other provider of a service and product that can have a positive outcomes in society.

It has been suggested that, ethnic minority businesses, being it social or otherwise, rely exclusively on personal and community social networks, rather than formal channels of finance and assistances, particularly during the start up process (Fadahunsi et al., 2000). Thus entrepreneurs such as Levi Roots of Reggae Reggae Sauce who sought external finance from the “Dragon’s Den” may be more of an exception rather than the norm. Although there are limitations to this approach, these social networks that ethnic entrepreneurs possessed are nevertheless extremely powerful in overcoming some of the discriminations that they perceivably faced (Ram ,1994), especially within ethnic communities of significant sizes such as Indian, Pakistani, and Black African and Black Caribbean, where a number of enclaves have been developed throughout the UK.

Whilst the uses of community and personal networks of ethnic entrepreneurs and social entrepreneurs have been extensively explored in terms of obtaining advices and financial support (Fadahunsi et al., 2000), little attention has been paid on the impact of these networks on marketing development on ethnic social entrepreneurs in the existing literature. As many ethnic social entrepreneurs aim to provide services to their local communities, of which many are also from minority ethnic groups, having good personal and community networks are undoubtedly essential for their marketing development.

The aim of this research is to examine the extent of which intensity of network affects the ability of a social entrepreneur to exercise relationship marketing within the ethnic communities. More precisely, we would like to find out, throughout a long period, whether social initiatives targeting ethnic minority develop close ties with their customers, resulting in continuous purchasing; or whether the strength of such ties diminish overtime as a result of customer dissatisfaction. We would like to compare between social enterprises that provide non-ethnic specific services to ethnic minority customers and ethnic orientated social enterprises where the social network of the social entrepreneur is particularly essential to their business development. We would like to find out whether they adopt different marketing campaign to retain customer loyalty in the long run. In terms of the social enterprises we would like to focus on those that are involved in providing services to the elderly, such as day care centre, where there may be a role for ethnic specific products.

The role of social enterprises in the case of providing care to the elderly people

The term “social entrepreneurship” emerged as a new label for describing the work of community, voluntary and public organizations, as well as private firms working for

social rather than for-profit objectives. It is fundamentally about using a business approach to achieve public benefit through defined social or environmental objectives. Many commercial businesses have social objectives, but social enterprises are distinctive, because their social or environmental purpose is central to what they do.

It has been suggested that social enterprises are the perfect vehicle to provide health care, employment, as well as to build the strength of communities (Taylor, 2002). Social enterprises reflect goals of local communities by providing otherwise unavailable facilities, as well as retaining wealth for the communities that they served. At the same time, as of organisations in the private sector, social enterprises have the enterprising character to carry these initiatives forward in an innovative and dynamic way (Taylor, 2002).

In fact, throughout the UK, there is a long tradition of community involvement in the provision of health and social care. Many communities built and managed their own hospitals before the NHS was established in the late 1940s, and until now, many charities and not-for-profit organisations are providing care services to the elderly in their communities. Statistics shows that the number of people aged over 85 will increase from 1.1 million in 1998 to 3.3 million by 2056, suggesting a rise from 1.9% of the population to 5.2% (ONS, 1999). This suggests an increasing demand for such services in the long run.

Government strategies to diversify the health care market also further increase opportunities for social enterprises to operate in this area. The NHS and Community Care Act 1990 made a series of significant changes on the way that social care was organised and paid for. The act introduced an internal market into the supply of health

care making the public sector an ‘enabler’ rather than ‘supplier’ of these services. Government and policy makers have been recommending a range of services aiming to keep elderly people out of hospital and other public facilities, partly for the purpose of cost-reduction and partly to enable elderly people to live independent in homely environments in the community with care tailored to their individual and specific needs. Whilst it is likely that the vast majority of health care services will still be provided by the public sector, commissioning and procurement of services to the private sector is becoming the norm. Organisations in the private sector are encouraged to come up with more entrepreneurial and cost-effective ways to provide healthcare services that are sensitive to users and communities, with funding available to local authorities to assess the needs of these projects (Taylor, 2002).

With government now encourage older people to stay at home, the home care and day care market in the UK is thriving (Taylor, 2002). Nevertheless, those who are staying at home face substantial barriers, including the requirement of people to assist with ‘odd’ jobs, shopping, cleaning, transport, leisure, and most importantly, to overcome the sense of isolation (Nottinghamshire County Council, 2000). According to Taylor (2002), the situation creates opportunities for three types of entrepreneurs: first, those that already have, or capability to develop, facilities to run businesses or deliver services, including housing associations already running sheltered or extra care facilities as well as those that provide day or home care services for older people. Second, volunteer sector organisations already work with older people in the community. Third, new partnership organisations set up specifically to respond to particular local intermediate care proposals.

Residential home is one of the options. However, this is being seen as a shirking market (Taylor, 2002). Many old people do not want to go to home. This is particularly the case of some ethnic minority groups where sending elderly to home is a taboo. Current policies aim to encourage people to live independently in their own homes for as long as possible, with home being a possible option only for those at the very end of their lives, or for those with dementia or those who are classified as elderly mental infirm. This study will therefore focus on the development of day care and home care facilities as well as other facilities surrounding it.

The role of ethnic specific care provision for elderly people

One area of growth that suffers from specific and proven under-provision is among ethnic communities (Taylor, 2002). Since WW2, large wave of migrants settled in different parts of the UK to take up job opportunities or to avoid prosecution in their home country. Many Asian and West Indian, two of the largest groups of immigrants from outside Europe, were typically emigrated as children or young adults from East Africa, the Caribbean, and the Indian subcontinent, from the early 1960s onwards (Dahya, 1973; Bhachu, 1991; Peach, 1998). Many of these 1st generation immigrants are now approaching retirement. Demographic projection suggests a significant growth in the number of ethnic minority in the UK, with the proportion of those over 65 expected to increase from 5% in 1991 to 15% in 2011 (Henwood, 2001). Therefore there is a clear increase in demand for elderly care service amongst ethnic minority groups.

Elderly people from ethnic minority groups often return to their country of origin after retirement, due to lower cost of living as well as cultural adjustment (Barnes and Taylor, 2006). However, as many elderly people became frailer and more dependent,

they prefer to live near their children, who are now based in the UK (Taylor, 2002). Many also expect their children to provide financial and moral supports (Barnes and Taylor, 2006). However, as many of them are not well integrated into the mainstream society (Bhachu, 1991; Peach, 1998), the desire to remain in the community creates opportunities for ethnic specific care services, which can now be found in areas with high concentration of ethnic minorities. Many social enterprises have responded to the opportunities provided by the general development of the independent sector to build specific residential homes and day centres and to establish culturally specific home care provider. In East London, for example, there are a number of culturally and community specific home care providers targeting ethnic minority elderly people, serving Bangladeshi, Somali, Vietnamese, Chinese, Jewish, and Muslim communities (Taylor, 2002). On top of appropriate ordinary daily care, these initiatives also provide ethnic elderly specific health care that is part of culturally appropriate services, including food, access to religious and spiritual facilities as well as communication.

However, providing ethnic specific health care is not easy. There needs to be a community that is sufficiently large to sustain provision. Serving a niche market within an enclave often means operating in small scale, which often resulted in higher cost due to the failure to utilise economies of scale. The failure to match the cost of larger providers does not only affect the sustainability of the programme, but also the willingness of local authorities to fund and support these services. In addition, the current purchasing strategies of many local authorities as well as accreditation burden often disfavour small scale operations.

Nevertheless, the use of social network within a closed knitted community enables some ethnic firms to enjoy a competitive advantage over their 'indigenous' counterpart. First, it is easier to mobilise assistances from people within their own community, including financial and business supports (Fadahunsi et al., 2000). Second, ethnic minority social enterprises are more likely to gain cheap or free labour from kin as well as members from within their communities (Ram and Jones, 1998). Third, ethnic social enterprises may gain from in-group networks of trade and information exchange, for example, in the case of purchasing food products from ethnic food suppliers. Finally, ethnic minority social enterprises may gain preferential patronage by co-ethnic customers, resulting in more stable income (Ram and Jones, 1998). Very often people from the same background provide a sense of 'trust, security, and reliability', which are often perceived as non-replicable outside the community boundary (Fadahunsi et al., 2000). While the general population of small business owners and social and community entrepreneurs are also known to exploit similar networks (Curran et al., 1995), there appears to be less dependent on these networks than those who came from ethnic minority groups (Ward, 1987). The aim of this research is to explore this final point further. Whilst extensive research has been conducted to establish whether ethnic minority enterprises are more successful in capturing ethnic customers, this study focuses on their ability to retain ethnic customers, thus ensuring their sustainability in the long run. We would like to examine whether the sentimental attachment of the elderly with their particular ethnic group will be strong enough a factor to help customer retention, and whether it would offset other potentially important criteria, including health and safety, when making a long term purchasing decision.

Marketing of ethnic social enterprises

Knowing the buying motivations of customers has been an important part of understanding customer loyalty and brand switching behaviour (Jacoby and Chestnut, 1978; van Trijp et al., 1996). It has been suggested that marketing of social enterprises is similar to marketing of other private enterprises in terms of opportunity recognition, entrepreneurial effort, and organisational culture (Shaw, 2005). In essence, marketing is about changing behaviours. Behavioural change is the engine that drives successful competitive advantage – developing a strong brand, building a relationship with customers and running a profitable company.

While ethnic minority entrepreneurs may be able to muster start-up resources through social and community networks, the ultimate success depends largely on whether they are successful in their targeted niche markets (Ram and Jones, 1998). Pires and Stanton (2003, p.184) argue that “marketing services to ethnic minority groups requires careful consideration of whether mainstream marketing strategies will effectively reach member of minority ethnic groups”. A target market is, at its most basic, the market or market segment at which a firm aims its marketing message (Cahill, 1997). Good targeting increases marketing effectiveness, and understanding market segmentation is a prerequisite of business success (Jones, 1999). In multicultural societies, ethnicity has an important influence within the marketing concept (Burton, 2002). However, this phenomenon has attracted less attention in the UK than in the USA, in terms of either marketing principles or practice; there is consequently a limited amount of literature on this subject.

Evidence suggests that products and services targeted at the general population often fail to reach minority ethnic populations resulting not only in a loss of profitable markets but also in unwitting perpetuation of lack of knowledge about different ethnic

groups (Ethnos, 2004). Curtis (2001) notes that UK businesses seem to be “way off pace” when it comes to targeting minority markets with ethnically-based marketing strategies, research revealing that only a fifth of British businesses are reaching out to minority ethnic groups. Clegg (1996) argues that “many UK companies ignore, or, even worse, patronise ethnic groups and exclude them from their marketing programmes”. Various reasons have been suggested for this lack of attention among organisations in Britain; uncertainty about how to undertake the task (Burton, 2002); lack of ethnic data or specific market research (Seligman, 2001); fear of seeming to be racist, stereotypical, tokenistic and patronising (Fletcher, 2003); lack of understanding of specific cultures, religions and languages (Cosidine, 2003); and general nervousness and fear (Curtis, 2001).

Nevertheless, the reluctance of many mainstream entrepreneurs to venture into ethnic minority businesses suggests that there may be a market niche for ethnic products of which a prospective entrepreneur from within the ethnic community may explore (Cui and Choudhry, 2002), thanks to the advantages of the existing personal and community networks that these ethnic entrepreneurs possessed (Fadahunsi et al., 2000). Instead of relying on traditional marketing techniques and proactive advertising, many ethnic entrepreneurs relied heavily on word of mouth, often counting on a high degree of patronage from their co-ethnic population (Fadahunsi et al., 2000). Such patronage is often not only limited to ethnic specific goods, such as food, magazine, etc, but often extends to non-ethnic specific goods such as dairy product, (Fadhunsi et al., 2000). In many ways the two can sometimes be mixed. In our case of elderly care, there are aspects of the service that can be provided by general health care providers, whilst other aspects, such as ethnic specific food, the ability to communicate in their own language, as well as the sense of community and

belongings, can only be provided by ethnic specific providers. In which case there is a question of whether all aspects of the health care should be provided by an ethnic orientated organisation, or whether they should focus on some aspects that are truly their specialities.

Nevertheless, within some ethnic communities where the co-ethnic solidarity is not as strong, there is a sense that their community often fails to provide products and services of sufficient quality that is merit of being purchased, particular in the more technical areas such as IT, car repairs, or even dry cleanings (Fadahunsi, 2000). Therefore whilst ethnic minority are more likely to purchase from their peers when it comes to non-technical products and services, there is likely to be a higher dependency of the mainstream market when it comes to purchasing more technical products and services. In the case of health care, it is the case of providing both professional and technical assistances as well as ethnic orientated services. Therefore the choice of purchasing is determine by both factors. It is also likely that the perceived importance of these factors may change overtime. For example, in health care, whilst some may initially prefer the ethnic orientated services that some providers provided, they may later on prefer the more professional set up of larger general health care providers, or vice versa. Our paper will focus on relationship marketing, in other word, how to develop a long term business relationship with ethnic clients.

Relationship marketing, first described by Theodore Levitt in 1983, is a form of marketing developed from direct response marketing campaigns conducted in the 1970's and 1980's. It is a long term approach which emphasizes the continuity of a relationship that should exist between an organisation and its customers (Berry, 1983).

In contrast to traditional marketing where acquisition of new customers of targeting groups is the main focus (Peppers and Rogers, 1994), relationship marketing emphasises the importance of customer service and quality and of developing a series of transactions with consumers. In other words, it is about customer satisfaction and retention (Gwinner et al., 1998), customer share development (Verhoef, 2003), and increased profit and recovery should a problem occur (Barnes, 1997; Jensen, 1997; Riley and Chernatony, 1997). Success with any of these strategies will result in high levels of repeat purchase, insulation from price increases and improved responsiveness to marketing communications by customers (Sorce, 2002). In addition, it has been suggested that customer retention is economically more advantageous than constantly seeking new customers (Verhoef, 2003), and consequently, in recent year the concept of relationship marketing has attracted much attention (e.g. Verhoef, 2003; Morgan and Hunt, 1994), and is becoming increasingly important as a business strategy (Verhoef, 2003; Gronroos, 1990).

Since the 1990s, the 'quality movement' placed customer's satisfaction as the ultimate goal of marketing. However, it is also found that the elasticity between brands is high in most industry sectors and for most products, with deflects from one brand to another highly common (Sorce, 2002). Therefore, increasingly firms are looking for ways to create greater commitments by customers. Two ways to achieve this are to build brand equity as well as relationships. Brand equity is more concerned with consumer products, for example, in the 1990s, many supermarkets in the UK began to provide loyalty cards in rewarding their long term customers (Oliver, 1999). It also uses mass media advertising, corporate citizenship and public events sponsorship to build a brand image.

Relationship marketing on the other hand is mostly concerned with building an interdependence relationship between two trading parties, for example, between a firm and its suppliers (B2B). Relationship marketing is beyond simply perceiving one brand as more desirable than the others, but, through repeat purchases, develop not only the liking and intention, but also the active desire to overcome situational influences and marketing efforts that may have the potential to cause switching behaviour (Oliver, 1999). Historical record of previous dealings are assessed and recorded by each party responsible. This is often not only between the two parties involved, but also affect the willingness to purchase of potential future customers, for example, through reviewing the customer rating of the company on the internet. However, relationship marketing can also be applied to situations between business and customers (B2C), particularly in the service sectors where maintaining a good relationship is essential. Arguably the health care sector is more about both building a long term relationship as well as appropriate branding.

Ward and Dragger (2007) suggest a number of factors that affects the strength of customer relationship, including:

- The duration of the relationship process;
- The frequency of consumer contact;
- The demographic characteristics of customers;
- The perceived importance of customer relationship.

As this approach focuses on the lifetime value of the customer rather than the value of a single transaction, relationship marketing focuses on retaining customers by maintaining and strengthening win-win relationships overtime (Gronroos, 1990).

It can be argued, that ethnic entrepreneurs have a ‘head-start’ when it comes to mobilising customers from within their social and community networks (Fadahunsi et al., 2000). However, whether the advantage can be sustained in the long term (i.e. duration) is yet to be explored. The emotive loyalty described by Coyles and Gokey (2002) may eventually erode when the perceived quality of the service does not match up with customer’s expectation. In a sector where close personal contact is required, the quality of the service provision is therefore also a main key to the retention of customers. If such emotive loyalty cannot be sustained in the long run, then it is important for ethnic health care providers to develop deliberate loyalty, where customers maintain loyalty as a result of continuous rational assessments on price and performance in comparison to other providers (Coyle and Gokey, 2002).

However, it is important to note that in the health care sector where the fee payer is often not the beneficiary of the service (but their immediate family members, often their children), the quality of the service perceived by the fee payer is equally important. Since they do not personally experienced the product, feedbacks from the person to be cared for, as well as their perceived professionalism (especially in the case when the elderly cannot communicate, or cannot remember what happen) are important in them making the choice of continuous purchasing. Another question that may require further investigation is whether switching to another health care provider entails high costs, as if this is the case, then inertial loyalty can be developed (Coyle and Gokey, 2002), which suggests that there is minimal role of relationship marketing.

Coyles and Gokey (2002) concluded in their longitudinal survey that the loyalty patterns of customers are influenced by five structural factors within an industry:

- How often purchases are made
- The frequency of other kinds of interactions such as service calls
- The emotional or financial importance of a purchase
- The degree of differentiation among competitors offerings
- Ease of switching.

The study will therefore examine the relationship marketing campaigns of some of the ethnic and non-ethnic specific health care providers to assess their strategies to maintain customer loyalty and retain customers in the long run.

Proposed Research Method

Few types of social enterprises targeting elderly people are identified:

- Those that provide day care centre and related services
- Those that provide outreach activities
- Those that provide food (Meal on wheels)

In this study, we would like to compare between different approaches adopted by ethnic and non-ethnic social enterprises within the health care sector in maintaining their relationships with ethnic minority customers. In addition, we would like to explore how customers perceive their relationship with their service providers change overtime. This includes the cared person, their relatives, as well as those who paid for the services.

At this stage we have not identified the particular ethnic groups to focus on, but based on our currently available language expertises we would like to focus on the following ethnic groups:

- Black African
- Pakistani
- Chinese

Based on previous research, it is expected that different ethnic groups may exhibit different levels of social cohesion, which would lead to different strength of social and community networks (Fadahunsi et al., 2000) and therefore their subsequent relationship with their service providers.

The approach of this study is still in its embryonic stage and we intend to explore the topic further. The topic is subject to debate and we welcome any participants to make a contribution to enable us come up with more refined research questions and methodology.

References

- Barnes, H. and Taylor, R (2006) *Work, Saving and Retirement Among Ethnic Minorities: A Qualitative Study*. DWP Research Report No 396. DWP: Norwich
- Berry L (1983) *Relationship Marketing*, Chicago: American Marketing Association.
- Bhachu, P. (1991) 'The East African Sikh Diaspora: The British Case', in S. Vertovec (ed.) *Aspects of the South Asian Diaspora*, Oxford University Press: Delhi.
- Bridge S., Murtagh, B. and O'Neill, K. (2008), *Understanding the Social Economy and the Third Sector*. London: Palgrave Macmillan.
- Burton, D. (2002), "Incorporating ethnicity into marketing intelligence and planning", *Market Intelligence & Planning*, 20, 7, 442-51.
- Cahill, D. (1997), "Target marketing and segmentation: valid and useful tools for marketing", *Management Decision*, 35, 1, 10-13.
- Coyles, S. and Gokey, T. (2002) "Customer Retention Is Not Enough." *The McKinsey Quarterly* 2, 18 Sept. 2002.
- Considine, P. (2003), "Understanding ethnic media", *Campaign*, 26 September.
- Cui, G. and Choudhury, P. (2002), "Marketplace diversity and cost-effective strategies", *Journal of Consumer Marketing*, 19, 1, 54-73.
- Curran, J., Blackburn, R. and Kitching, J. (1995) *Small Business, Networking and Networks: A literature Review*. Working Paper, Small Business Research Centre, Kingston University: London.
- Curtis, J. (2001), "Think ethnic, act ethnic", *Marketing*, 5 July
- Dahya, B. (1973) 'Pakistanis in Britain: Transients or Settlers', *Race*, 14, 241-278.
- Ethnos (2004), *Why Ethnic Minorities*, Ethnos Research and Consultancy, London.
- Fadahunsi, A., Smallbone, S., and Supri, S. (2000) Networking and ethnic minority enterprise development: Insights from a North London study, *Journal of Small Business and Enterprise Development*, 7, 3, 228-240.
- Fletcher, D. (2003), *Reaching the Ethnic Consumer: A Challenge for Marketers*, Mediaedge.
- Gwinner, Kevin P., Dwayne D. Gremler, and Mary Jo Bitner (1998), "Relational Benefits in Service Industries: The Customer's Perspective," *Journal of the Academy of Marketing Science*, 26 (2), 101-114.
- Henwood, M. (2001) *Future Impact?* London: The King's Fund

- Jacoby, J., Chestnut, R. (1978) *Brand loyalty: Measurement and management*. New York: Wiley.
- Jones, J. (Ed.) (1999), *How to Use Advertising to Build Strong Brands*, Sage, Thousand Oaks, CA.
- Nottinghamshire County Council (2000) *Practical Tasks and the Preventative Agenda* Nottingham: Nottinghamshire County Council
- Oliver, R. L. "Whence Consumer Loyalty." *Journal of Marketing*, 63, 33-44.
- Pires, G. and Stanton, J. (2003), "Marketing services across cultures", in Rugimbana, R. and Nwankwo, S. (Eds), *Cross Cultural Marketing*, Thomson, London.
- Peach, C. (1998) 'Trends on Levels of Caribbean Segregation', in M. Chamberlain (ed.) *Caribbean Migration*. London: Routledge.
- Pepper, D. and Roger, M. (1993) *The One-to-one future: Building Relationships*. New York: Double Day
- Ram, M. (1994) 'Unravelling social networks in ethnic minority firms', *International Small Business Journal*, 12, 3, 42-63.
- Ram, M. and Jones, T (1998) *Ethnic Minorities in Business*, London: Small Business Research Trust.
- Seligman, P. (2001), "Ethnic minorities: a marketer's segmented breakdown", *Brand Strategy*, 151, 10-15.
- Shaw, E. (2007), 'Marketing in Social Enterprise Context', *Qualitative Market Research: An International Journal* 7, 3, 194-205
- Taylor, M. (2002) *Social Enterprise Guide to Health and Social Care for the Elderly*, Social Enterprise London: London
- van Trijp, H.C.M., Hoyer, W.D., Inman, J.J. (1996). 'Why switch? Product category-level explanations for true variety-seeking behavior'. *Journal of Marketing Research*, 33, 3, 281-292.
- Verhoef, P.C. (2003), Understanding the Effect of Customer Relationship Management Efforts on Customer Retention and Customer Share Development, *Journal of Marketing*, 67 (4), 30-45
- Ward, R. (1987) 'Ethnic Entrepreneurs in Britain and Europe', in R Goffee and R. Scase (eds.) *Entrepreneurs in Europe*, London: Croom Helm.

Teaching Entrepreneurial Leadership: clarifying the concept for the classroom

by Muhammad Azam Roomi and Pegram Harrison

Abstract

This paper seeks to strengthen the connection between research and teaching in two fields that are well-established in themselves, but not often studied together: entrepreneurship and leadership. We refer to the fusion of these concepts as “entrepreneurial leadership”. After surveying the disparate literature covering both fields together, we present results of a survey of current teaching practices in UK universities for both topics, and make recommendations for essential design elements in entrepreneurial leadership teaching materials.

Introduction

This paper seeks to strengthen the connection between research and teaching in two fields that are well-established in themselves, but not often studied together: entrepreneurship and leadership. We refer to the fusion of these concepts as “entrepreneurial leadership”. After surveying the disparate literature covering both fields together, we present results of a survey of current teaching practices in UK universities for both topics, and make recommendations for essential design elements in entrepreneurial leadership teaching materials.

By identifying the important aspects of leadership that are taught successfully for more corporate contexts, by adapting these to entrepreneurial contexts, and by designing materials for the delivery of this adapted content, this paper aims to provide new insights into the nature and practice of entrepreneurial leadership education.

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Literature Review

Research on entrepreneurship education has developed considerably in recent years (Hannon, 2006; Hartshorn and Hannon, 2005; Heinonen and Poikkijoki, 2006; Johnson *et al.*, 2006; Kuratko, 2005; Wilson *et al.*, 2007). However, very little of it considers or investigates entrepreneurial leadership directly. Some sources on entrepreneurial education touch on the integral role of leadership (Jack and Anderson, 1999; Klapper, 2004; Matlay, 2005a; McKeown *et al.*, 2006; Smith *et al.*, 2006) but do not develop the notion in detail. Additionally, there is a concern (typical of early-stage research agendas) to establish clear methodologies (Cox *et al.*, 2002; Gorman *et al.*, 1997; Matlay, 2005b; Matlay, 2006), but this precludes more developed enquiry. Work from other countries, even fairly recently from the US, makes little or no mention of leadership (Chen *et al.*, 2006; Fayolle *et al.*, 2006; Katz, 2003; Solomon, 2007; Streeter, et al, 2002).

There are no comparable surveys of leadership education, nor any consistent understanding of educational best practices. Moreover, within the great variety of approaches, the teaching of leadership in the UK universities tends to be aimed at employees or potential employees of relatively large corporations. There remains a need for more systematic leadership education in entrepreneurial contexts, or of entrepreneurial leadership education.

Literature on entrepreneurial leadership education in UK HEIs

Four recent surveys of the literature on UK entrepreneurship education provide a model for the objectives envisioned here for research into entrepreneurial leadership education. McKeown *et al* (2006) survey three areas across graduate entrepreneurship education: type, content, and delivery methods. We propose a similar inventory of entrepreneurial leadership education, looking at 1) the number, level and structure of programmes to determine which (if any) offer systematic exposure to leadership issues within an entrepreneurial context; 2) the content of such programmes in terms of topics presented and developed; and 3) the delivery methods in terms of teaching strategies, methods, and technologies.

Matlay (2005a) critiques the validity, comparability and generalisability of work on entrepreneurial education, pointing out limits in extant studies, and noting that the progress of entrepreneurship education is hard to assess because there is great variety in key definitions: that of entrepreneurship itself, of the nature of entrepreneurial knowledge and skills, of the nature of entrepreneurial learning, and of the evaluation of entrepreneurial capacity. We aim to address this critique with a conceptualisation of entrepreneurial leadership education that defines a position on these points.

Matlay and Carey (2007) have conducted a 10-year longitudinal project on UK entrepreneurship education generally; (a similar, much earlier study by Fleming (1996) took place in Ireland). With in-depth qualitative data, from 40 universities, on development and implementation of entrepreneurship education, it nonetheless has no focus on entrepreneurial leadership. A strong conclusion to this work, however, is that actual *and perceived* barriers must be overcome to understand stakeholder requirements. We propose that chief among these requirements is the demand for leadership education among potential and early-stage entrepreneurs, and that a more focused understanding of the barriers this group perceives in attaining that goal will greatly enhance the state of entrepreneurship education and practice.

Finally, Hannon (2007) and the National Council for Graduate Entrepreneurship have conducted a comprehensive census of 131 HEIs looking at weaknesses in UK entrepreneurship education. The survey's findings point to a number of factors that will bear investigating in the context of entrepreneurial leadership: 1) a high variability across the country in the conceptualisation of entrepreneurship and of leadership, 2) similar variability

in programme design, 3) a lack of understanding of the impact of investment on educational outcomes, 4) some indicative correlation between enterprise and leadership education and entrepreneurial leadership propensity (if not activity), and 5) the proposition that growth in activity will require growth in curricula, pedagogic innovation, teacher capability, institutional resource support.

Our survey is informed by these predecessors. Full results are presented in Section 1; a more detailed presentation is given in Section 0 below; followed by analysis and recommendations for the design of teaching materials in Section 0.

Literature on teaching materials for entrepreneurial leadership education

There is some research on entrepreneurship education, and on leadership education, and even a small amount on entrepreneurial leadership education. In each instance, there are implications for best practices in designing and delivering teaching materials which we use for our recommendations later in the paper.

Okudan and Rzasa (2004) argue for a project-based approach; the notion of the process model in entrepreneurial education is also espoused by Leitch and Harrison (1999), although without direct attention to leadership development. Okudan and Rzasa's work is based on their own teaching experience in an engineering school and on a survey of other entrepreneurial leadership teaching programmes in North American universities; they conduct a brief review of entrepreneurial education literature, but almost none of leadership literature. They are dismissive of three book-length studies of entrepreneurial leadership which we too have found overly theoretical and impractical: Smilor and Sexton, 1996; Schulz, 1999; and Eggert, 1999. Their suggestions for leadership skill development in the context of entrepreneurial education are practical and well-tested: "the course has two foci: 1) leadership skills development, which utilizes concrete experience, reflective observation, abstract conceptualisation and active experimentation; and 2) business plan development and implementation, which primarily utilizes active experimentation," (Okudan and Rzasa, 2004: 20). Their work suggests that certain elements should be central to the design of teaching materials: skills development exercises, workshops to form teams and observe team dynamics, consistent "project dissection" or critical appraisal of the project as it evolves. This latter notion of the importance of critical reflection as a tool for leadership education is strongly endorsed by Densten and Gray (2001); the idea appears elsewhere sporadically throughout the literature of both entrepreneurship and leadership, and we have expanded it in our own recommendations for the development of teaching materials.

Entrepreneurship education literature generally endorses active or experiential learning methods that take students out of the lecture-room, especially through the use of technology, and regards integration of such methods into entrepreneurial curricula as progress in the effectiveness of entrepreneurial education (Bécharde and Grégoire, 2005; Charney, 2000; Cooper et al, 2004; Jones, 2004; Kirby, 2004; Kourilsky, 1995; Kouratko, 2003; Leitch and Harrison, 1999; Lüthje and Franke, 2002; Neck et al 1999; Vesper and Gartner, 1997). The same is true for leadership education, although the idea is less comprehensively explored in that section of the literature (Brungardt, 1997; Mitchell and Poutiatine, 2001; Rost, 2000). One implication of this general predilection for active and experiential learning methods in both areas is that such methods can be used to fuse the two educational agendas.

A superficial search of the internet using the string "entrepreneurship AND leadership AND education" produces a notable result: in North America, there are at least 25 university institutes, teaching programmes, educational foundations, or core courses in graduate schools named with the term "entrepreneurial leadership". In the UK currently, there is one (a 5 day CPD course at Liverpool John Moores University). At the very least, this means that where there is a great deal more educational provision for leadership in an entrepreneurial context in

the US than in the UK, there is also likely to be more awareness of the need and value of such provision. Moreover, each of these centres, programmes and courses represents a model, a source of inspiration, and a source of teaching materials to be emulated where possible and appropriate. Certainly, it is possible that none of these does more than re-package traditional entrepreneurship and leadership education, rather than organically fusing them—but the preponderance of such efforts, even if they are superficial, suggests a wide response to a perceived market demand.

There is actually some literature that begins to fuse the two areas. Brockhaus (1982) is an old source, looking at the psychological traits common to leaders and entrepreneurs—but there is no attention to developing those traits. Gupta, MacMillan and Surie (2004) organise their analysis of entrepreneurial leadership around the implications for cross-cultural contexts, and not for developing entrepreneurial leadership generally. Work comparing the evolution of each topic as a field of research does not delve too deeply into actual ideas (Cogliser and Brigham, 2004). Robinson, Goleby and Hosgood (2006: 1) look at entrepreneurship as “one type of leadership orientation”, but are more concerned to develop an entrepreneurial paradigm than an entrepreneurial leadership paradigm. Similarly, the work of Michael Ensley and colleagues (Ensley et al, 2006a; 2006b) and of Robert Vecchio (2003) looks at leadership behaviours in entrepreneurial contexts, and at management trends common to both perspectives, but from a strongly psychological perspective; also, his model of entrepreneurial leadership is designed to integrate process and level influences by identifying how a conception of leadership changes as an entrepreneurial organisation develops. In concluding that “entrepreneurship is simply a type of leadership that occurs in a specific setting” he steps away from a unified notion of entrepreneurial leadership and replaces it with a hierarchical typology in which leadership includes entrepreneurship. As will be seen below in Sections 0, 0 and 0, our survey respondents perceive almost the reverse.

Harrison and Leitch (1994) have specifically addressed entrepreneurship and leadership together, but concentrate on research and theorising instead of practical implications for teaching. They do make some general recommendations touching on the design of teaching materials, and favour a team-based approach to learning; Henry, Hill and Leitch (2003) also re-visit the notion of team-based learning in the context of entrepreneurship training. Eyal and Kark (2004) come closer to recommending specific tactics for developing entrepreneurial leadership effectiveness, but are concerned with the leadership of schools and not companies.

Most directly relevant, Kuratko (2007) introduces a full special issue in leadership journal on entrepreneurial leadership in the 21st century; the issue as a whole takes a fairly psychological approach, but Kuratko’s introduction ranges more widely over the global impact of entrepreneurial leadership, the nature of entrepreneurial leaders, negative effects, ethical issues, and corporate entrepreneurial leadership. This useful variety of perspectives has proved useful in deriving our own understanding of what elements are essential in the design of entrepreneurial leadership teaching materials. It is also worth noting that its conceptualisation of entrepreneurial leadership is as close to being fused as any we have found elsewhere. However, the emphasis is on understanding and assessing entrepreneurial leadership—not necessarily on developing it, or on disaggregating its constituent parts for the purpose of teaching it.

Thus, despite some encouraging initial movement, there remains scope for exploring best practices for the teaching of entrepreneurial leadership, with the pragmatic intention of applying any new insights to the design of teaching materials.

Implications and Impact

The major implications of Hannon (2007) are that further research is needed to identify and benchmark educational best practice; that better professional development and support for educators are needed; and that the NCGE is eager to work more closely with partners to

provide more credible evidence for research, recommendations for educational policy, and new teaching materials to put into practice. Hannon concludes that “overcoming any fragilities in support and development and delivering enterprise education opportunities for all demands an ongoing understanding of the ‘state of play’ across the sector,” (Hannon, 2007: 210).

In conclusion, this paper aims to make measurable impacts on learning: first through research, to achieve improved understanding of entrepreneurial leadership education; and next by providing strong recommendations for educational best practices and the developing new, active, technologically informed, relevant and sustainable teaching materials.

Survey Results

Fifty one educators were surveyed in HEIs in the UK, in the summer and autumn of 2008, with a response rate of 100%. Additional follow-up interviews with 9 respondents were conducted by email and telephone. The survey encouraged respondents to think about entrepreneurship education and leadership education separately before asking about instances of both topics occurring in conjunction with each other, i.e. entrepreneurial leadership education.

Topics covered

When asked to list entrepreneurship topics covered at their HEI, respondents answers were grouped generally under the headings as mentioned in Table 1. Roughly two thirds of entrepreneurial courses include content on leadership, and only about a quarter definitely do not; there is a small grey area of less than 10%. Conversely, only one third of leadership courses contain entrepreneurial content; nearly half definitely do not; the grey area is twice as big at 20%.

Please insert Table 1 about here

According to respondents, there is a significant amount of leadership taught inside entrepreneurial courses and considerably less entrepreneurship taught inside leadership courses. There is some perceived logic to including leadership as a sub-set of entrepreneurship—although about a tenth of respondent report uncertainty about this. There is less perceived logic to including entrepreneurship as a subset of leadership: more respondents refute the idea than confirm it, and a fifth are uncertain (see above, Section 0).

It is also interesting to note that there is generally more uncertainty around leadership—whether it is taught independently, embedded with other material, or at all. Possibly, the lack of clarity about entrepreneurial leadership comes from lack of clarity about leadership pedagogy generally.

In addition, looking at the statements about course content in responses to the questions regarding entrepreneurship and leadership topics covered, there is greater detail and subtlety in describing entrepreneurship topics, whereas leadership topics are often not specified further than the word “leadership”. This implies that the leadership topic agenda is perceived as monolithic, without being informed by ideas from elsewhere. Whether this is true or not is immaterial; the perception of respondents is that leadership courses do not contain much content that is recognisably entrepreneurial, or similar to that found in entrepreneurial courses.

Finally, qualitative data indicate implicit inclusion of leadership topics in entrepreneurial courses: for example, “none, specifically [are covered] but case studies used highlight the actions that entrepreneurs take and the consequences”. Comments about entrepreneurial

topics in leadership courses do not seem to imply even implicit coverage, except in the most general way: “mindset, entrepreneurial behaviour, entrepreneurial thinking”. The main observation is that there very little direct fusion of entrepreneurship and leadership topics perceived in the responses.

Learning methods

The portfolio of learning methods employed for entrepreneurship and leadership show some similarities—lectures dominate in each topic, role playing is only used about half the time in both topics, exams are sometimes used while simulations, site-visits, and technology are rarely employed, etc. More interestingly, there are some major points of difference in the profiles of each topic that indicate fairly little attention to entrepreneurial leadership.

Group exercises comprise an important learning method for entrepreneurship; far less so for leadership, especially where the group members are selected by the students themselves. About half of the respondents use self-selected groups in entrepreneurship, but only 20% in leadership. Where team dynamics can be a major source of learning, and an opportunity for students to witness close hand any behaviours conducive to effective leadership, the lack of group exercises seems like a wasted opportunity; self-selected groups, moreover, provide opportunities for peer reflection on leadership effectiveness in ways that groups comprised of strangers do not. Also, the paucity of group-work in leadership topics, relative to group-work in entrepreneurship topics, indicates little exploration of entrepreneurial topics inside whatever leadership group-work might occur. In short, it implies little teaching of entrepreneurial leadership.

More generally, responses concerning learning methods for leadership seem to emphasize the lower ends of the scale in almost all cases (other than lectures and case studies), with thin but even distribution around other levels. Responses for entrepreneurship are more evenly spread in the middle levels. This might indicate greater diversity in methods employed for entrepreneurship than leadership. More to the point, such a mismatch implies that attention to entrepreneurial leadership is more likely to emerge from an entrepreneurial perspective than a leadership one—that entrepreneurship teachers might be more receptive to including leadership content in their already diversified learning environments, while leadership teachers might find it harder to apply their material in an entrepreneurial context or to relate it to an entrepreneurial perspective. Entrepreneurial leadership, in short, is perceived as being more a matter of entrepreneurship than leadership—apparently the opposite position to that stipulated by Vecchio (2003), as shown above in Section 0.

Teachers

In the response pool, teachers of entrepreneurship are reported as being academics nearly 90% of the time, with contributions from practitioners about 50% of the time. Teachers of leadership are only 70% academics, with practitioners contributing less than 50%. These results do not match the learning methods responses for guest practitioners and speakers: about 40% in entrepreneurship, and somewhat over 40% in leadership. Respondents are reporting practitioner input differently when asked to focus on it more directly, and also minimising it somewhat.

Nonetheless, there is a perception among respondents that practitioner input is considerably less frequent than academic input in both topics. One implication of this might be that any systematic attempt to teach entrepreneurial leadership would be more likely to emerge from an academic perspective than a practitioner perspective. Again, if this is an effective way to approach the challenge of entrepreneurial leadership, then there is an opportunity for academics to conceptualise a theory of entrepreneurial leadership and to teach it more explicitly. If, however, there is little practitioner resource to draw on in teaching the

concept, then the topic risks remaining too theoretical and insufficiently practical. This is a concern not limited to entrepreneurial leadership, though, and common to business and management pedagogy generally.

Institutional support

This area of the responses mainly implies a perception that entrepreneurial ideas are fairly well taught, whereas leadership ideas are less well taught. It also implies that the teaching of leadership skills in an entrepreneurial context—i.e. entrepreneurial leadership—is not emphasised explicitly.

For example, 75% of respondents report that their courses provide the knowledge necessary to *start* a business, but only 60% impart the knowledge necessary to *run* a business. While this is consistent with the fairly familiar idea of the serial entrepreneur—good at starting, bad at running—it also implies a perceived lack of opportunity to focus explicitly on entrepreneurial leadership in the form of knowledge needed to lead a team in various stages of a company’s evolution, even if this requires a shift in leadership techniques along the way. “Knowledge” of a certain concepts relating to entrepreneurship and leadership is not resulting in a unified conceptualisation of entrepreneurial leadership.

Similarly, on the related subject of skills, respondents report that relatively few “leaderships skills needed by entrepreneurs” are fostered, whereas more “social skills needed by entrepreneurs” are encouraged. Again, this seems to demonstrate that a specific skill set for entrepreneurial leadership—however that is conceptualised in the “knowledge” conveyed—is not being identified or taught.

Effectiveness

The effectiveness of leadership learning in fostering entrepreneurial activity was examined through questions about the rate of start-ups by students of different topics. While we observe that about 60% of entrepreneurship students are estimated to become entrepreneurs sooner or later after graduation, it is more interesting to note that fewer leadership students are estimated to become entrepreneurs at all (14%). Also, by a rough estimate their entrepreneurial involvement declines over time—only very small percentage are estimated as starting their own business within 5 years of graduation, as opposed to larger and more reliable percentage estimates for entrepreneurship students. There is a perception that people who study entrepreneurship are more likely to stick to it, whereas most people who study leadership move away from entrepreneurial activity. Does this imply that more focused teaching on entrepreneurial leadership would increase the overall proportion of students becoming and staying entrepreneurs?

Conclusion

With this relatively superficial data, it would be unwise to claim that these results indicate a clear educational opportunity. Yes, entrepreneurial leadership education seems nearly unavailable, but this could imply either that it is greatly in demand or that it is largely unwanted. And though the next section of this paper considers the case for entrepreneurial leadership education in abstract, without consideration for its demand by teachers or students, it seems important to reflect that greater explicitness in entrepreneurial education and in leadership education, might be gained by marrying aspects of the two together in carefully considered ways. We attempt this in the section below.

Analysis and Recommendations

Rationale for entrepreneurial leadership education

The results of our literature review and survey suggest strongly that entrepreneurial leadership education should provide students with both a theoretical understanding and a practical orientation. It should aim to enable students, through a sequence of topics, to gain a basis of knowledge and skills in general management, with its practical outcome being the ability to lead in an entrepreneurial context. Moreover, it should be applicable both in traditional entrepreneurial contexts, such as start-ups or early-stage companies, and in larger and well-established organisations. Entrepreneurial leadership education should serve the needs of any team or organisation where competitive advantage is to be gained from the pursuit of opportunity beyond the resources currently controlled (Stevenson, 1985).

We are forming the notion that if general leadership consists of strategic vision coupled with the ability to influence and motivate others, 'Entrepreneurial Leadership' consists of the same together with an entrepreneurial mindset and skill-set to identify, develop and take advantage of innovative ideas for the sustainable future of the organisation (Thornberry, 2006; Hitt, Ireland and Hoskisson 2001). Entrepreneurial leadership involves managing an organisation through relationships and culture, rather than through command and control; this requires knowing how to handle and deal with the risk, uncertainty and ambiguity that face all entrepreneurial organisations (Burns, 2007). Entrepreneurial leadership education, therefore, should aim to provide students and budding entrepreneurs with a mindset that encourages and teaches them to think and act in an entrepreneurial way. In other words, it must give them the desire to think and act differently from managers (Thornberry, 2006). Entrepreneurial leaders are never satisfied with the status quo (Kirby, 2003; Carter and Jones-Evans, 2006; Thornberry, 2006; Burns, 2007; Morris, Kuratko and Covin, 2008) but are always looking for ways in which they can change and exploit their current transactional situation for the better (Venkataraman and Van de Ven, 1998; Kao, 1989).

Thus entrepreneurial leadership education should inculcate a desire to create, build and change collaboratively (Thornberry, 2006). It should provide students and entrepreneurs with 'hands on' experience of spotting and orchestrating new opportunities, and of galvanizing a team to take advantage of those opportunities before they are missed. Entrepreneurial leadership education should enable students to set direction, communicate and motivate their entrepreneurial teams.

Essential design elements for entrepreneurial leadership education

From earlier research (Begley, 1995; Stewart et al., 1998) Vecchio (2003) derives five elements common to those effective in entrepreneurship and leadership: an internal locus of control, a need for achievement, a risk-taking propensity, a need for autonomy, and self-efficacy. In fact, he finds insufficient evidence for associating these traits with entrepreneurs as opposed to leaders, and encourages recognition of "common trends"—entrepreneurship being, by his conception, a type of leadership. Yet our survey data indicate that this commonality is not well-perceived in either stand-alone entrepreneurship or stand-alone leadership education, and that possibly leadership can be conceived as a type of entrepreneurship instead of the opposite. At the very least, these conflicting views suggests that Vecchio's five elements could form the basis of any materials for teaching either entrepreneurship or leadership, and possibly therefore both together in an explicitly fused concept of entrepreneurial leadership.

Internal Locus of Control

Internal locus of control is the belief and confidence that individuals exercise in order to have full control and influence on all their outcomes (Brooks, 2003). There is an implication in some entrepreneurial personality literature that favours a strong internal locus of control (Lee and Tsang, 2001). In other words, effective entrepreneurs hold within their own

behaviour and characteristics the notion that success or failure depends on themselves alone (Carter and Jones-Evans, 2000). They do not believe fate or luck has influenced any of their outcomes. Significantly, this internal locus of control becomes a source of authority and influence, an ability to motivate others (Kuratko and Hodgetts, 2001)—in short, an ability to lead. Here, an entrepreneurial trait is being identified as a potential source of leadership effectiveness.

Need for Achievement

Entrepreneurial leaders are very high achieving individuals who are always looking for new ways to seek out and act upon new opportunities. High need for achievement is a key entrepreneurial trait (McClelland, 1961; Osborne, 2003) and is identified as a leadership attribute of entrepreneurs (Czarniawska-Joerges and Wolff, 1991; Lupkin and Dess, 1996); entrepreneurial leadership is also allied with high need for achievement (Gupta et al., 2004). Entrepreneurial leadership education should thus highlight this need.

Risk-taking Propensity

Entrepreneurial need to be risk assessors and at the same time be able to accept and encourage risk-taking. Risk-taking propensity has been recognised by many authors and practitioners in this field as a strong attribute of entrepreneurs (Ahmed, 1985; Koh, 1996; Korunka, Frank and Lueger et al., 2003; Pearson and Chatterjee, 2001) and is also associated with entrepreneurial behaviour (Atherton, 2004). Risk-propensity is also important to leadership in certain contexts—and where these contexts are dominant, entrepreneurial leadership is arguably a more appropriate mode than, say, managerial leadership.

Need for Autonomy

An entrepreneur's relationship with others results in a disinclination for certain circumstances where autonomy is restricted, and an attraction to situations where autonomy can be freely exercised. By this conceptualisation, entrepreneurs tend naturally toward specific types of leadership. Educational efforts that identify the need for autonomy and allow students to build on that awareness are likely to develop both entrepreneurial and leadership skills concurrently.

Self-Efficacy

Research shows that people who are high in self-efficacy are more likely to engage in activities associated with start-ups (Boyd and Vozikis, 1994; Scherer, Adams, Carley, and Wiche, 1989; Barbosa, Gerhardt, and Kickul, 2007), to perceive opportunity where others perceive risk, and to feel competent to cope with obstacles. Where leadership is required to seize opportunity, achieve start-up, or confront risk, highly self-efficacious entrepreneurs will be more effective in meeting these challenges. Some research, moreover, indicates that entrepreneurial founders—i.e. leaders—score higher on self-efficacy measures than non-founders (Chen, Greene, and Crick, 1998). So, there is an implication that teaching people to believe in themselves as entrepreneurs is also teaching them to be more effective leaders.

Common Trends in our Survey

Vecchio (2003) identifies trends common to effective entrepreneurship and effective leadership; this suggests topics that would fit well in entrepreneurial leadership education—though it must be stressed that these are not the only topics recommended for inclusion, and that they should be complemented with a variety of other inputs for an effective educational programme.

Moreover, our survey implies a general perception among respondents that creating self-awareness among entrepreneurs about traits that can be harnessed for effectiveness in entrepreneurial contexts also develops leadership effectiveness. This implication is weak, and it basically reverses Vecchio's position that entrepreneurship is a type of leadership. But even if leadership a set of topics that can be learned through studying entrepreneurship, the

intimate relation of the two is likely to bear fruit in developing knowledge, skills and behaviours that result in effectiveness in both entrepreneurial and leadership roles.

Vecchio's own analysis leads toward an attempt at "tying entrepreneurship to leadership" (2003: Section 10), in which he posits other ways of thinking about entrepreneurs' relations to others and how these tend toward a leadership role. In the following section, we propose further ways of setting the context for understanding entrepreneurial leadership that can form the basis for teaching the subject explicitly.

Setting the context

In addition to supporting the suggestions in Vecchio (2003), our survey suggests that it is important to set a context for entrepreneurial leadership education that relates to leadership and entrepreneurial theory in general, as well as to management theory and practice more broadly. In other words, entrepreneurial leadership must not be understood as something too specific or special, but rather as something widely applicable in many kinds and sizes of organisation—as a set of transferrable skills.

To set a meaningful context for understanding entrepreneurship and leadership as a pair of skills transferrable to each other—i.e., as a fused notion of entrepreneurial leadership—we recommend incorporating some teaching relating to leadership and management in general, and also, that this should include theories which naturally relate to the imperatives of entrepreneurial activity. A variety of different forms of general leadership and management theory can be related to an entrepreneurial context:

Leadership theory relevant in entrepreneurial contexts

Team-oriented leadership: This theory looks at the relationship the leader has with its group members, specifically focusing on the leader's ability to elicit high levels of group partaking and involvement between individual members (Gupta et al., 2004). There is strong similarity between this form of leadership and entrepreneurial leadership according to Gupta et al., (2004: 06): "In both cases the leader elicits high levels of participation and involvement by the group".

Value-based leadership: This approach concentrates on the leader's ability to articulate an attractive vision and mission, and to appeal to followers by being admired and respected. The similarity between this approach and entrepreneurial leadership according to Gupta et al., (2004: 06) "lies in the leader's capacity to build a high-expectation vision and to convey confidence in the followers' ability to accomplish that vision".

Neo-charismatic or transformational leadership: This theory focuses on the leader's ability to evoke follower's performance through a transcendence of self-interested behaviour by adhering to the follower's needs for self-actualisation (Burns, 1978; Bass, 1985). As Burns has argued (1978: 20), this kind of leadership "binds leaders and followers together in a mutual and continuing pursuit of a higher purpose".

Transformational vs. Transactional leadership theory

In addition, students should explore and learn to distinguish transformational leadership from transactional leadership. Transactional leadership is based on the legitimate power given to the leader within the bureaucratic structure of the organisation (Mullen, 2002; Burns, 1978). This leadership style heavily emphasises the end-result—for example, work tasks and outcomes, rewards and punishments (Mullen, 2002). Transactional leadership is concerned with managing workers under strict rules and regulations to avoid change as much as possible and to avoid making decisions that could alter the status quo of the organisation.

Transformational leadership, on the other hand, is a more appropriate model for an entrepreneurial context. It portrays leaders as charismatics or visionaries (Burns, 1978; Burns, 2004) who are able to inspire and energise workers into following them and thereby transcend self-interest for the good of the organisation (Robbins, 1984). Transformational

leaders are always looking for ways to overturn the status quo of their organisation through major change (Burns, 2004). They are able to influence and motivate their followers to do more than is expected using their ability to empower and to encourage others to achieve a shared vision, and by leading through example (Yuki, 1989).

Students should have the opportunity to distinguish between these two fundamental forms of leadership, and learn how transformational leadership is both necessary and desirable in an entrepreneurial context. In constantly changing markets, an entrepreneurial leader's ability to implement and support change in an organisation, rather than following or waiting for it to happen, is often the chief source of competitive advantage (Taffinder, 1995).

Influencing Strategies

Truly transformational leaders cannot rely on the mere exercise of power or status in leading an organisation; in order to be effective, leaders must be capable of moving an organisation towards its goals without coercion. Similarly, Parks (2006) argues that successful entrepreneurship is not achieved by dictating what should happen, but by maintaining a shared understanding between an entrepreneurial team and its leader. Thus entrepreneurial leadership education should also develop influencing strategies such as reason, friendliness, coalition forming, bargaining, assertiveness, appeals to higher authority and the judicious threat of sanctions (Duening and Sherrill, 2005).

Communicating a shared vision

"Vision is the cornerstone of the entrepreneurial architecture" Burns (2005: 85). In other words, entrepreneurial leaders need an ability to define and communicate a shared vision for an organisation (Burns, 2005). This shared vision in turn creates enthusiasm and motivation, builds confidence, and strengthens connections within a team and throughout an organisation, by working on people's emotions (Burns, 2005). Being able to communicate at an emotional level, and to engender a sense of common concern through appropriately deployed influencing strategies, are essential traits of entrepreneurial leaders and should therefore be an important objective of entrepreneurial leadership education. Students should learn how to communicate emotionally about the value of opportunities, and to show that exploiting these opportunities will achieve the shared vision (Ireland, Hitt and Sirmon, 2003).

Managerial vs. Entrepreneurial Leadership

Similar to the distinction between transactional and transformational leadership, the differences between 'Managerial' and 'Entrepreneurial' leadership are accentuated in an entrepreneurial context. Both require distinctive skills and capabilities in order to be effective. Managerial leadership uses discipline and control to reduce complexity, and is concerned with detail and logic. Entrepreneurial leadership, on the other hand, is more concerned with building up long-term reciprocal relationships along the value chain of an organisation, where effectiveness is determined by the ability to influence others, set direction, communicate, motivate, develop change and handle resources strategically, and to encourage others to act in a competitively advantageous and opportunity-seeking way (Burns, 2005; Covin and Slevin, 2002; Ireland and Hitt, 1999; Rowe, 2001). Thus, understanding the traits and behaviours that distinguish the managerial leader from the entrepreneurial leader (Duening and Sherrill, 2005; Burns, 2005; 2007; Morris et al., 2008) should also be embedded in entrepreneurial leadership education.

Interpersonal skills

In addition, entrepreneurial leadership education should develop particular sorts of interpersonal and team-working skills that focus on leading organisations by consensus and agreement, rather than command (Burns, 2005). Thus another role of entrepreneurial leadership education is to teach people how to build interpersonal skills that win them the trust, credibility and respect of teams, and the ability to inspire and encourage high performance (Wickham, 1998).

Conflict and entrepreneurial leadership

All leaders need to understand how to deal with conflict, and if necessary be able to adjust their preferred behaviours to handle conflict constructively. Given the shifting complexity of most entrepreneurial environments, entrepreneurial leaders need this ability more than most (Burns, 2005); in other words, since entrepreneurial leaders generally face higher uncertainty and ambiguity, to be effective the entrepreneurial leader needs both a conceptual understanding of how to adapt and handle conflict, and an innate tendency to put this ability into practice. Burns cites the ‘Thomas-Kilman conflict modes instrument’ for categorising the ways in which conflict is handled in different situations: avoidance, accommodation, compromise, competition and collaboration (Brooks, 2003; Burns, 2005; Thomas, 1976). Burns (2001) and Timmons (1999) observe that in entrepreneurial contexts, only certain types of response to conflict are effective: “successful entrepreneurs are interpersonally supporting and nurturing not interpersonally competitive” Burns (2001: 257). Thus entrepreneurial leadership education must develop this specific sort of conflict-handling ability.

Adversity

As with conflict, leaders must learn how to deal with adversity, failure and disappointment. They must be able to look at disruptions to progress and (a) analyse what went wrong, (b) learn from their mistakes, and (c) accept liability for their responsibility and move on (Lippitt, 1983; 1987). Other research suggests, however, that entrepreneurial leaders deal with adversity in somewhat different ways: less of (a), a more intuitive or semi-conscious approach to (b), and an easy ability with (c). In short, they do not waste valuable time considering ‘what if?’ but instead quickly learn from and take responsibility for their mistakes (Kirby, 2003). Entrepreneurial leadership education should therefore develop tactics for emphasising to teams that failure is due to circumstantial reasons, not individual ones—that failure is nobody’s fault (McGrath and MacMillan, 2000). Since failure is part of being creative and failure must be accepted in order for risk to be taken in the first place, an important role of entrepreneurial leadership is to channel creativity and risk in tandem, and maintain rules for coping with imbalances (Ireland and Hitt, 1999). Students of entrepreneurial leadership should learn how to achieve sufficient freedom to let creativity develop, but equally should learn methods of mitigating and tolerating adversity. These essential design elements for entrepreneurial leadership teaching materials are summarised in Table 2.

Please insert Table 2 about here

Discretionary design elements for entrepreneurial leadership education, and suggested readings

In addition to these recommendations, a number of other considerations have been suggested (by our work) which are worth considering in designing teaching materials for entrepreneurial leadership. Also included in each section are references to sources that can be used in building a bibliography for each area of study.

Corporate Entrepreneurship

Topics relating to corporate entrepreneurship and intrapreneurship should be well-integrated in entrepreneurial leadership education, mainly because they allow access to entrepreneurial concepts by students less inclined to entrepreneurial activity in themselves but interested in understanding it—students who intend to be consultants or investors, for example. Also, it is important to stress that entrepreneurship can be considered as a set of

skills transferrable to any organisational context where innovation, risk-taking, opportunity recognition, and other similar imperatives occur.

Equally, corporate entrepreneurship education should emphasize leadership themes. Corporate entrepreneurship is the creation of new business in large established organisations by entrepreneurial people being innovative and creative and generating new ideas (Guth and Ginsberg, 1990). Students should learn that entrepreneurship occurs in corporate contexts as well as start-ups and smaller, younger organisations, and how leadership in such contexts differs from corporate or other traditional forms of leadership. Distinctive elements of leadership learning in a corporate entrepreneurship context should emphasise following themes:

- Creating and constructing the entrepreneurial culture (Burns, 2005)
- Creativity and innovation and how each should be encouraged and rewarded (Burns, 2005; 2007)
- The degree of freedom and encouragement which are given to entrepreneurs to produce new ideas with potential. (Slevin and Covin, 1990; Sinetar, 1985; Dess, Lumpkin and McGee, 1999; Kuratko and Hodgetts, 2004)
- Support and encouragement given to risk-taking (Burns, 2005)
- Management and organisation structure (Burns, 2005)
- Availability of resources, both tangible and intangible (Sathe, 1985; Von-Hippel, 1977; Souder, 1981; Sykes, 1986; Hisrich and Peters, 1986; Katz and Gartner, 1988; Sykes and Block, 1989)
- Team-work and cross-functional teams (Burns, 2005)
- The learning organisation (Burns, 2005)
- To construct an entrepreneurial architecture (Burns, 2007)
- Strategic thinking (Burns, 2005)

The Dark Side of Entrepreneurial Leadership

Entrepreneurial leadership education should also look at some risks and pitfalls to which it is particularly prone. Certain factors discussed can result in a destructive outcome for the entrepreneurial leader (Kets de Vries, 1985).

- Confrontations with risk (Kuratko, 2007; Morris et al., 2008): Entrepreneurial leaders are always changing and questioning the status quo of the organisation; this entails risk which might be high or low depending on the associated reward, which forms the basis against which the entrepreneurial leader tends to evaluate the risk (Kuratko, 2007; Morris et al., 2008). These risks can be grouped into financial, career, family/social, and psychic categories (Kuratko, 2007; Morris et al., 2008). If tolerance of the level of cannot be communicated to other stakeholders, then confrontations destructive to the team are more likely to occur.
- Stress also features strongly (Kuratko, 2007; Akande, 1992; Buttner, 1992; Morris et al., 2008) in spoiling the fulfilment of demands and expectations, and ultimately in undermining an entrepreneur's ability to take responsibility for failure.
- Lack of self-awareness may also be associated with the dark side to entrepreneurial leadership. This could include unrealistic desire for success or becoming overly controlling, resulting in distrust within an organisation (Kuratko and Hodgetts, 2007).

Entrepreneurial leadership education should address these issues and provide practical solutions on how entrepreneurs can avoid the dark side of entrepreneurial leadership.

Ethics

The particular perspective on ethics of entrepreneurial leaders should also be taught, through means that demonstrate how important a 'value system' is to entrepreneurial leaders' effectiveness (Kuratko, 2007). Research shows that entrepreneurial leaders who are seen to have an ethical approach in their decision making are more likely to be followed; while

conversely, entrepreneurial leaders seen to demonstrate an unethical approach towards decision making, are unlikely to gain followers within an organisation (Kuratko, 2007). Effective entrepreneurial leadership education will stress the importance of ethical behaviour in decision-making for entrepreneurs, to improve organisational performance as well as for its own sake.

The Entrepreneurial Mindset

Entrepreneurial leadership education should teach students and potential entrepreneurs how to exploit and use an entrepreneurial mindset—their own, as well as that of people working with them. An entrepreneurial mindset is both an individualistic and collective phenomenon that is important to entrepreneurs, managers and leaders (Covin and Slevin, 2002). McGrath and MacMillan (2000) have defined an entrepreneurial mindset as a way in which individuals think about business, focusing on the benefits occurring with uncertainty. This means that an entrepreneurial mindset is vital in capturing opportunities and as a result, can contribute to a competitive advantage for an organisation (Miles, Heppard and Miles et al, 2000). Education that emphasize this might include materials designed to increase (1) the ability to recognise and analyse entrepreneurial opportunities (Casson, 1982; Shane and Venkataraman, 2000); (2) entrepreneurial alertness (Kirzner, 1997; Alvarez and Barney, 2002); (3) real options logic; (4) entrepreneurial framework (Ireland et al., 2003); (5) dominant logic (Bettis and Prahalad, 1995; Prahalad and Bettis, 1986).

Human Resource Management

Managing human resources is critical to the success of any firm; and all the more so to organisations that might contain no other resources in-house, such as start-up ventures (Morris et al., 2008). Thus, integrating human resource management materials within a programme on entrepreneurial leadership is vital for introducing students to the central importance of investing considerably in the HRM function (Morris et al., 2008). Properly understood, HRM can make the difference between success and failure in an entrepreneurial organisation or venture: in recruitment, through proper job descriptions and person specifications encouraging entrepreneurially inclined individuals to apply to the organisation; in selection, through properly structured interviews and psychometric evaluations; in hiring, through properly structured remuneration packages; in development, through appropriate motivation and the dispensation of rewards and compensations that are effective in an entrepreneurial context. Entrepreneurial leadership education should look at HRM in such a way that emphasizes such distinctive features of managing human resources in an entrepreneurial context.

Empowerment

In order for entrepreneurs to be effective they need to feel empowered by a sense of themselves as leaders. Another role, therefore, of entrepreneurial leadership education is to create this sense of empowerment; our research suggests the following tactics for doing so:

- Operate an empowerment-focused organisation (Burns, 2005) and create empowering job designs such as job enlargement, job rotation, job enrichment (Brooks, 2003). Students will explore, and benefit from the above points and recognise why they are key issues and requirements for an entrepreneurial leader to implement into an entrepreneurial organisation in order to empower and motivate their entrepreneurs.
- Build trust. Entrepreneurial leaders must learn how to trust their employees to do their work and inspire them to take an active role over their actions instead of using tight control mechanisms to ensure the work gets done (Burns, 2005). If the employees feel trusted they are more empowered to be creative and innovative for the good of the organisation.

- Continuously train employees. (Burns, 2005) with on- and off-the-job training in order to capitalise on opportunities to innovate as they arise. Training should be continuous because of the constantly evolving nature of entrepreneurial organisations.
- Develop the knowledge and skills to encourage and support the rapid transfer of knowledge and information sharing between one another (Burns, 2005). Students will learn and understand how important it is to recognise employee's contributions.
- Reward success.
- Tolerate mistakes and failures.
- Involve employees in decision-making by giving them authority, listening to their ideas, suggestions and solutions (Burns, 2005).
- Maintain a decentralised, flat organisational structure (Brooks, 2003).
- Be approachable (Burns, 2005).

The discretionary design elements for entrepreneurial leadership teaching materials are summarised in Table3.

Please insert Table 2 about here

Conclusions

This paper has reviewed current literature relating to entrepreneurship and leadership and surveyed teaching practice in the UK, and on this basis makes specific recommendations for designing teaching materials for entrepreneurial leadership.

In brief, entrepreneurial leadership education should teach students how to cultivate their entrepreneurial capability in leadership roles and their leadership capability in entrepreneurial contexts. Essentially, it should be about developing appropriate forms of social capital with which to combine, exploit and maintain the particular capabilities and expertises of entrepreneurial teams, especially balancing creativity, influence, a particular attitude to risk, and an ability to access scarce resources strategically. Through learning these general and specific things concurrently, students can become proficient in their ability to exploit opportunity, to maintain their teams' core competencies for pursuing innovation, and to gain competitive advantage for their organisations in uncertain environments—in short, to become entrepreneurial leaders.

References

- Ahmed, S. U. (1985). "Nach, Risk-Taking Propensity, Locus of Control and Entrepreneurship," *Personality and Individual Differences*, 6(6), 781-782.
- Akande, A. (1992). "Coping with Entrepreneurial Stress," *Leadership and Organisational Development Journal*, 13(2), 27-32.
- Alvarez, S. A., and J. R. Barney (2002). "Resource-Based Theory and the Entrepreneurial Firm," in *Strategic Entrepreneurship: Creating a New Mindset*. Eds. M. A. Hitt, R. D. Ireland, S. M. Camp and D. L. Sexton. Oxford: Blackwell.
- Atherton, A. (2004). "Unbundling Enterprise and Entrepreneurship: From Perceptions and Preconceptions to Concept and Practice," *Entrepreneurship and Innovation*, 5(2), 121-128.
- Barbosa, S. D., M. W. Gerhardt, and J. R. Kickul (2007). "The Role of Cognitive Style and Risk Preference on Entrepreneurial Self-Efficacy and Entrepreneurial Intentions," *Journal of Leadership & Organizational Studies*, 13, 86-104.
- Bass, B. M. (1985). *Leadership and Performance Beyond Expectations*. New York: Free Press.
- Béchar, J-P., and D. D. Grégoire (2005). "Entrepreneurship Education Research Revisited: The Case of Higher Education," *Academy of Management Learning & Education*, 4(1), 22-43.
- Begley, J. M. (1995). "Using Founder Status, Age of Firm, and Company Growth Rate as the Basis for Distinguishing Entrepreneurs from Managers of Smaller Business," *Journal of Business Venturing*, 10, 249-263.
- Bettis, R. A., and C. K. Prahalad (1995). "Strategic Management Journal," *Strategic Management Journal*, 16, 5-14.
- Boyd, N. G., and G. S. Vozikis (1994). "The Influence of Self-Efficacy in the Development of Entrepreneurial Intentions and Actions," *Entrepreneurship Theory and Practice*, 18, 63-90.
- Brockhaus, R. H. (1982). "The Psychology of an Entrepreneur," in *Encyclopedia of Entrepreneurship*. Eds. C. Kent, S. D. and V. K. Englewood Hills, NJ: Prentice Hall, 39-56.
- Brooks, I. (2003). *Organisational Behaviour*. Essex: Pearson Education Limited.
- Brungardt, C. (1997). "The Making of Leaders: A Review of the Research in Leadership Development and Education," *Journal of Leadership & Organizational Studies*, 3(3), 81-95.
- Burnes, B. (2004). *Managing Change*. Essex: Pearson Education Limited.
- Burns, J. M. (1978). *Leadership*. New York: Harper and Row.
- Burns, P. (2001). *Entrepreneurship and Small Business*. Hampshire: Palgrave.
- (2005). *Corporate Entrepreneurship Building an Entrepreneurial Organisation*. Hampshire: Palgrave Macmillan.
- (2007). *Entrepreneurship and Small Business*. Hampshire: Palgrave Macmillan.
- Buttner, E. H. (1992). "Entrepreneurial Stress: Is It Hazardous to Your Health?," *Journal of Managerial Issues* 4(2), 223-240.
- Carter, S., and D. Jones-Evans (2000). *Enterprise and Small Business: Principles Practice and Policy*. Essex: Pearson Education Limited.
- (2006). *Enterprise and Small Business Principles Practice and Policy*. Essex: Pearson Education Limited.
- Casson, M. (1982). *The Entrepreneur*. Totowa, NJ: Barnes and Noble Books.
- Charney, A., and G. D. Libecap (2000). "The Impact of Entrepreneurship Education," in *Insights: A Kaufman Research Series*. Kansas City.
- Chen, C., P. Greene, and A. Crick (1998). "Does Entrepreneurial Self-Efficacy Distinguish Entrepreneurs from Managers?," *Journal of Business Venturing*, 13, 295-316.
- Chen, Z., H. Li, S. Kong, and Q. Xu (2006). "An Analytic Knowledge Network Process for Construction Entrepreneurship Education," *Journal of Management Development* 25(1), 11-27.

- Cogliser, C. and K. Brigham (2004). "The Intersection of Leadership and Entrepreneurship: Mutual Lessons to Be Learned," *The Leadership Quarterly*, 15(6), 771-799.
- Cooper, S., C. Bottomley, and J. Gordon (2004). "Stepping out of the Classroom and up the Ladder of Learning: An Experiential Learning Approach to Entrepreneurship Education" *Industry and Higher Education*, 18(1), 11-22.
- Covin, J. G., and D. P. Slevin (2002). "The Entrepreneurial Imperatives of Strategic Leadership," in *Strategic Entrepreneurship: Creating a New Mindset*. Eds. M. A. Hitt, R. D. Ireland, S. M. Camp and D. L. Sexton. Oxford: Blackwell.
- Cox, L. W., S. L. Mueller, and S. E. Moss (2002). "The Impact of Entrepreneurship Education on Entrepreneurial Self-Efficacy," *International Journal of Entrepreneurship Education*, 1(1), 229-245.
- Czarniawska-Joerges, B. and R. Wolff (1991). "Leaders, Managers, Entrepreneurs on and Off the Organisational Stage," *Organisation Studies*, 12(4), 529-546.
- Densten, I. L., and J. Gray (2001). "Leadership Development and Reflection: What Is the Connection?," *The International Journal of Educational Management*, 15(3), 119-124.
- Dess, G., G. T. Lumpkin, and J. E. McGee, J E (1999). "Linking Corporate Entrepreneurship to Strategic, Structure and Process: Suggested Research Directions," *Entrepreneurship: Theory and Practice*, 23(3), 11-28.
- Duening, T. N., and W. Sherrill, W (2005). *Entrepreneurism: Exploring Entrepreneurship from a Business Process Perspective*. Phoenix, AZ: Arizona State University, Atomic dog publishing.
- Eggert, N. (1998). *Contemporary Leadership for Entrepreneurial Organizations: Paradigms, Metaphors, and Wicked Problems*. Westport: CT: Quorum.
- Ensley, M. D., K. M. Hmieleski, and C. L. Pearce (2006a). "The Importance of Vertical and Shared Leadership within New Venture Top Management Teams: Implications for the Performance of Startups," *The Leadership Quarterly*, 17(3), 217-231.
- Ensley, M. D., C. L. Pearce, and K. M. Hmieleski (2006b). "The Moderating Effect of Environmental Dynamism on the Relationship between Entrepreneur Leadership Behavior and New Venture Performance " *Journal of Business Venturing*, 21(2), 243-263
- Eyal, O., and R. Kark (2004). "How Do Transformational Leaders Transform Organizations? A Study of the Relationship between Leadership and Entrepreneurship," *Leadership and Policy in Schools*, 3(3), 211-236.
- Fayolle, A., B. Gailly, and N. Lassas-Clerc (2006). "Assessing the Impact of Entrepreneurship Education Programmes: A New Methodology," *Journal of European Industrial Training*, 30(9), 701-720.
- Fleming, P. (1996). "Entrepreneurship Education in Ireland: A Longitudinal Study," *Academy of Entrepreneurship Journal, European Edition* 2(1).
- Gorman, G., D. Hanlon, and W. King (1997). "Some Research Perspectives on Entrepreneurship Education and Education for Small Business Management: A Ten-Year Literature Review," *International Small Business Journal*, 15(3), 56-77.
- Gupta, V., I. C. MacMillan, and G. Surie (2004). "Entrepreneurial Leadership: Developing and Measuring a Cross-Cultural Construct," *Journal of Business Venturing*, 19(2), 241-260.
- Guth, W. D., and Ginsberg, A (1990). "Guest Editor's Introduction. Corporate Entrepreneurship," *Strategic Management Journal*, Special Issue, 5-16.
- Hannon, P. D. (2006). "Teaching Pigeons to Dance: Sense and Meaning in Entrepreneurship Education," *Education + Training*, 48(5), 296-308.
- (2007). "Enterprise for All?: The Fragility of Enterprise Provision across England's Heis," *Journal of Small Business and Enterprise Development*, 14(2), 183-210.

- Harrison, R. T., and C. M. Leitch (1994). "Entrepreneurship and Leadership: The Implications for Education and Development," *Entrepreneurship and Regional Development*, 6(2), 111-125.
- Hartshorn, C. and P. D. Hannon (2005). "Paradoxes in Entrepreneurship Education: Chalk and Talk or Chalk and Cheese?: A Case Approach," *Education + Training*, 47(8/9), 616-627.
- Heinonen, J. and S-A. Poikkijoki (2006). "An Entrepreneurial Self-Directed Approach to Entrepreneurship Education: Mission Impossible?," *Journal of Management Development*, 25(1), 80-94.
- Henry, C., F. Hill, and C. M. Leitch (2003). *Entrepreneurship Education and Training*: Ashgate Publishing.
- Hisrich, R. D. and M. P. Peters (1986). "Establishing a New Business Venture Unit within a Firm," *Journal of Business Venturing*, 1(2), 307-322.
- Hitt, M. A., R. D. Ireland, and R. E. Hoskisson (2001). *Strategic Management: Competitiveness and Globalization*. Mason, OH: Thomson South-Western.
- Hornsby, J. S., D. W. Naffziger, D. F. Kuratko, and R. V. Montagno (1993). "An Interactive Model of the Corporate Entrepreneurship Process," *Entrepreneurship: Theory and Practice*, 17(2), 29-37.
- Ireland, R. D. and M. A. Hitt (1999). "Achieving and Maintaining Competitiveness in the 21st Century: The Role of Strategic Leadership," *Academy of Management Executive*, 13(1), 43-57.
- Ireland, R. D., M. A. Hitt and D. G. Sirmon (2003). "A Model of Strategic Entrepreneurship: The Construct and Its Dimensions," *Journal of Management Development*, 29(6), 963-989.
- Jack, S. R. and A. R. Anderson (1999). "Entrepreneurship Education within the Enterprise Culture," *International Journal of Entrepreneurial Behaviour & Research*, 5(3), 110-125.
- Johnson, D., J. B. Craig, and R. Hildebrand (2006). "Entrepreneurship Education: Towards a Discipline-Based Framework," *Journal of Management Development*, 25(1), 40-54.
- Jones, C., and J. English (2004). "A Contemporary Approach to Entrepreneurship Education," *Education and Training*, 46(8/9), 416-423.
- Kao, J. (1989). *Entrepreneurship Creativity, and Organisation Text, Cases and Readings*: Prentice-Hall.
- Katz, J. A. (2003). "The Chronology and Trajectory of American Entrepreneurship Education: 1876-1999," *Journal of Business Venturing*, 18(2), 283-300.
- Katz, J. and W. B. Gartner (1988). "Properties of Emerging Organisation," *Academy of Management Review*, 13(3), 429-441.
- Kets de Vries, M. F. R. (1985). "The Dark Side of Entrepreneurship," *Harvard Business Review*, Nov-Dec, 160-167.
- Kirby, D. A. (2003). *Entrepreneurship*. Berkshire: McGraw Hill Education.
- (2004). "Entrepreneurship Education: Can Business Schools Meet the Challenge?," *Education and Training*, 46(8/9), 510-519.
- Kirzner, I. (1997). *How Markets Work: Disequilibrium, Entrepreneurship and Discovery*: The Institute of Economic Affairs.
- Klapper, R. (2004). "Government Goals and Entrepreneurship Education – an Investigation at a Grande Ecole in France," *Education and Training*, 46(3), 127-137.
- Koh, H. C. (1996). "Testing Hypotheses of Entrepreneurial Characteristics: A Study of Hong Kong Mba Students," *Journal of Management Psychology*, 11(3), 12-25.
- Korunka, C., H. Frank, M. Lueger, and J. Mugler (2003). "The Entrepreneurial Personality in the Content of Resources, Environment, and the Start up Process - a Configurational Approach," *Entrepreneurship Theory and Practice*, 28(1), 23-42.
- Kourilsky, M. L. (1995). "Entrepreneurship Education: Opportunity in Search of Curriculum," in *Business Education Forum*. Knasas City, MO: Ewing Marion Kauffman Foundation.

- Kuratko, D. F. (2003). "Entrepreneurship Education: Emerging Trends and Challenges for the 21st Century," in *Coleman Foundation White Paper Series: U.S. Association of Small Business & Entrepreneurship*.
- (2005). "The Emergence of Entrepreneurship Education: Development, Trends, and Challenges," *Entrepreneurship Theory and Practice*, 29(5), 577-598.
- (2007). "Entrepreneurial Leadership in the 21st Century: Guest Editor's Perspective," *Journal of Leadership and Organisational Studies*, 13(4).
- Kuratko, D. F., and R. M. Hodgetts (2001). *Entrepreneurship: A Contemporary Approach*. Orlando: FL: Harcourt Inc.
- (2004). *Entrepreneurship Theory, Process, Practice*. Mason: OH: Thomson South-Western.
- (2007). *Entrepreneurial: Theory, Process, and Practice*. Mason OH: Thomson South-Western.
- Lee, D., and E. Tsang (2001). "The Effects of Entrepreneurial Personality Background and Network Activities on Venture Growth," *Journal of Managerial Studies*, 38(4), 583-602.
- Leitch, C. M., and R. T. Harrison (1999). "A Process Model for Entrepreneurship Education and Development," *International Journal of Entrepreneurial Behaviour & Research*, 5(3), 83-109.
- Lippitt, G. L. (1983). *Putting Life in Perspective*. Bethesda: MD: Development Publications.
- (1987). "Entrepreneurial Leadership: A Performing Art," *Journal of Creative Behaviour*, 21(3), 264-270.
- Lumpkin, G. T., and G. Dess (1996). "Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance," *Academy of Management Review*, 21(1), 135-172.
- Fostering Entrepreneurship through University Education and Training: Lessons from Massachusetts Institute of Technology (2002). "Fostering Entrepreneurship through University Education and Training: Lessons from Massachusetts Institute of Technology," paper presented at the 2nd Annual Conference on: Innovative Research in Management, May 9 – 11, Stockholm, Sweden.
- Matlay, H. (2005a). "Entrepreneurship Education in UK Business Schools: Conceptual, Contextual and Policy Considerations," *Journal of Small Business and Enterprise Development*, 12(4), 627-643.
- (2005b). "Researching Entrepreneurship and Education: Part 1: What Is Entrepreneurship and Does It Matter?," *Education + Training*, 47(8/9), 665-677.
- (2006). "Researching Entrepreneurship and Education: Part 2: What Is Entrepreneurship Education and Does It Matter?," *Education + Training*, 48(8/9), 704-718.
- Matlay, H., and C. Carey (2007). "Entrepreneurship Education in the UK: A Longitudinal Perspective," *Journal of Small Business and Enterprise Development*, 14(2), 252-263.
- McGrath, R. G., and I. C. MacMillan (2000). *The Entrepreneurial Mindset: Strategies for Continuously Creating Opportunities in an Age of Uncertainty*. Boston: MA: Harvard Business School Press.
- McKeown, J., C. Millman, S. K. Sursani, K. Smith, and L. Martin (2006). "Graduate Entrepreneurship Education in the UK," *Education + Training*, 48(8/9), 597-613.
- Miles, G., K. A. Heppard, R. E. Miles, and C. C. Snow (2000). "Entrepreneurial Strategies: The Critical Role of Top Management," in *Entrepreneurship as Strategy: Competing on the Entrepreneurial Edge*. Eds. G. D. Meyer and K. A. Heppard: Sage Publications.
- Mitchell, M. M., and M. I. Poutiatine (2001). "Finding an Experiential Approach in Graduate Leadership Curricula," *Journal of Experiential Education*, 24(3), 179-185.
- Morris, M. H., D. F. Kuratko, and J. G. Covin (2008). *Corporate Entrepreneurship and Innovation*. Mason: OH: Thomson South-Western.
- Mullins, L. J. (2002). *Management and Organisational Behaviour*. Essex: Pearson Education Limited.

- Neck, C. P., H. M. Neck, C. C. Manz, and J. Godwin (1999). "'I Think I Can; I Think I Can': A Self-Leadership Perspective toward Enhancing Entrepreneur Thought Patterns, Self-Efficacy, and Performance," *Journal of Managerial Psychology*, 14(5/6), 477-501.
- Okudan, G. E., and S. E. Rzasa (2004). "Teaching Entrepreneurial Leadership: A Project-Based Approach," in *34th ASEE/IEEE Frontiers in Education Conference, Session T2E*. Savannah, GA, 18-23.
- Parks, S. (2006). *How to Be an Entrepreneur*: Pearson Education Limited.
- Pearson, C. A., and S. R. Chatterjee (2001). "Differences and Similarities of Entrepreneurial Characteristics in a Diverse Social Setting-Evidence from Australian and Singaporean Managers," *Journal of Enterprising Culture*, 9(3), 273-289.
- Prahalad, C. K. and R. A. Bettis (1986). "The Dominant Logic: A New Link between Diversity and Performance," *Strategic Management Journal*, 7(6), 485-501.
- Robbins, S. P. (1984). *Essentials of Organisational Behaviour*. Englewood Cliffs: NJ: Prentice Hall.
- Robinson, D. A., M. Goleby, and N. Hosgood (2006). "Entrepreneurship as a Values and Leadership Paradigm," in *Business Papers*: Bond University.
- Rost, J. (2000). "Leadership Education in Colleges: Toward a 21st Century Paradigm," *Journal of Leadership & Organizational Studies*, 7(1), 3-12.
- Rowe, W. G. (2001). "Creating Wealth in Organisations: The Role of Strategic Leadership," *Academy of Management Executive*, 15(1), 81-94.
- Sathe, V. (1985). "Managing an Entrepreneurial Dilemma: Nurturing Entrepreneurship and Control in Large Organisation," *Frontiers of Entrepreneurship Research*, 636-356.
- Scherer, R. F., J. S. Adams, S. S. Carley and F. A. Wiche (1989). "Role Model Performance Effects on Development of Entrepreneurial Career Preference," *Entrepreneurship Theory and Practice*, 13, 53-71.
- Schulz, W. (1999). *Creating Value through Skill-Based Strategy and Entrepreneurial Leadership*. New York, NY: Pergamon.
- Shane, S., and S. Venkataraman (2000). "The Promise of Entrepreneurship as a Field of Research," *Academy of Management Review*, 25, 217-236.
- Sinetar, M. (1985). "Entrepreneurs, Chaos and Creativity: Can Creative People Really Survive Large Company Structure?," *Sloan Management Review*, 65(5), 57-63.
- Slevin, D. P. and J. G. Covin (1990). "Juggling Entrepreneurial Style and Organisation Structure: How to Get Your Act Together," *Sloan Management Review*, 31(2), 43-54.
- Smilor, R. W. and D. L. Sexton (1996). *Leadership and Entrepreneurship: Personal and Organizational Development in Entrepreneurial Ventures*: Greenwood Publishing Group.
- Smith, A. J., L. A. Collins, and P. D. Hannon (2006). "Embedding New Entrepreneurship Programmes in Uk Higher Education Insitutions; Challenges and Considerations," *Education + Training*, 48(8/9).
- Solomon, G. (2007). "An Examination of Entrepreneurship Education in the United States," *Journal of Small Business and Enterprise Development*, 14(2), 168-182.
- Souder, W. (1981). "Encouraging Entrepreneurship in Large Corporations," *Research Management*, 14(3), 18-22.
- Stevenson, H., and D. Gumpert (1985). "The Heart of Entrepreneurship," *Harvard Business Review* March-April.
- Stewart, W. H., W. E. Watson, J. C. Carland, and J. W. Carland (1998). "A Proclivity for Entrepreneurship: A Comparison of Entrepreneurs, Small Business Owners, and Corporate Managers," *Journal of Business Venturing*, 14, 189-214.
- Streeter, D. H., J. P. Jaquette, and K. Hovis (2002). "University-Wide Entrepreneurship Education: Alternative Models and Current Trends," Cornell University: Department of Applied Economics and Management.

- Sykes, H. B. (1986). "The Anatomy of a Corporate Venturing Program," *Journal of Business Venturing*, 1(2).
- Sykes, H. B., and Z. Block (1989). "Corporate Venturing Obstacles and Solutions," *Journal of Business Venturing*, 4(3), 159-167.
- Taffinder, P. (1995). *The New Leaders Achieving Corporate Transformation through Dynamic Leadership*: Kogan.
- Thomas, K. (1976). "Conflict and Conflict Management," in *Handbook of Industrial and Organisational Psychology*. Ed. M. D. Dunnette. Chicago: Rand McNally.
- Thornberry, N. (2006). "Lead Like the Best Entrepreneurs: Learn How They Innovate, Grow and Profit," in *Babson Insights*.
- Timmons, J. A. (1999). *New Venture Creation: Entrepreneurship for the 21 Century*. Singapore: McGraw Hill International.
- Vecchio, R. P. (2003). "Entrepreneurship and Leadership: Common Trends and Common Threads," *Human Resource Management Review*, 13(2), 303-327
- Venkataraman, S., and A. H. Van deVen (1998). "Hostile Environment Jolts, Transaction Sets and New Business Development," *Journal of Business Venturing*, 13(3), 231-255.
- Vesper, K. H., and W. B. Gartner (1997). "Measuring Progress in Entrepreneurship Education," *Journal of Business Venturing*, 12(5), 403-421.
- Von Hippel, E. (1977). "Successful and Failing Internal Corporate Ventures: An Empirical Analysis," *Industrial Marketing Management*, 6(3), 163-174.
- Wickham, P. A. (1998). *Strategic Entrepreneurship*: Pitman Publishing.
- Wilson, F., J. Kickul and D. Marlino, D. (2007). "Gender, Entrepreneurial Self-Efficacy, and Entrepreneurial Career Intentions: Implications for Entrepreneurship Education," *Entrepreneurship Theory and Practice*, 29(5), 577-598.
- Yuki, G. (1989). *Leadership in Organisations*: Prentice-Hall International

Table 1

Topics Covered in Entrepreneurship and Leadership Courses

Topics Covered	Yes		No		Don't know	
	N	%	N	%	N	%
Entrepreneurship in stand-alone courses	41	80	9	18	0	0
Entrepreneurship embedded in other courses	48	94	3	6	0	0
Leadership in stand-alone courses	38	75	7	14	5	10
Leadership embedded in other courses	47	92	1	2	2	4
Leadership in entrepreneurial courses	33	65	12	24	4	8
Entrepreneurship in leadership courses	17	33	22	43	11	22

Table 2

Essential Design Elements for Entrepreneurial Leadership Teaching Materials

<ul style="list-style-type: none">• Leadership theory relevant in entrepreneurial context<ul style="list-style-type: none">- Team-oriented Leadership- Value-based leadership- Neo-charismatic / transformational leadership• Influencing strategies• Communicating a shared vision• Managerial vs Entrepreneurial Leadership• Interpersonal skills• Conflict• Adversity
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Table 3
Discretionary Design Elements for Entrepreneurial Leadership Teaching Materials

- Corporate Entrepreneurship
 - Creativity and innovation
 - Freedom to perceive and pursue opportunity
 - Support for risk-taking
 - Flat areas of management and organisation structure
 - Availability of resources tangible and intangible
 - Cross-functional teams
 - Learning organisation
 - Entrepreneurial architecture
 - Strategic thinking
- The Dark Side of Entrepreneurial Leadership
 - Confronting risk
 - Stress
 - Lack of self-awareness
- Ethics
- The Entrepreneurial Mindset
- Human Resource Management
- Empowerment
 - Focus on empowerment and empowering job designs
 - Build trust

Does the Value Profile of SCORE Volunteers Effect their Productivity in Assisting Small Business Entrepreneurs?

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Abstract

Public policy makers have long argued the need for empirical data as to the relevance and impact of providing management and technical assistance to small business entrepreneurs. The study is based on primary empirical data collected from individual SCORE volunteers who were members of the US based, National SCORE Association. Surveys using Rokeach's Value Survey (1968, 1973, and 1979) were made available using online survey methodology s to over 10,000 SCORE volunteers. Approximately 2,000 or 20 percent of the population responded and their results were cross validated and performance data were paired with each respondent.

The data were analyzed and factor analysis applied to ascertain if there were any value profiles that could predict performance and, hopefully, draw some inferences to the impact on SCORE volunteer performance. This was the first study employed in the public sector designed to measure the effect of values on overall performance of SCORE counselors.

Introduction

Scholars have long been interested in the subject of human values. This interest has ranged from abstract speculation by philosophers and political theoreticians to empirical scrutiny by quantitative psychologists. Since the early seventies, the study of values has grown dramatically, and a number of important conceptual pieces and research studies have appeared (Rokeach 1979). This new interest has been reflected in a growing literature relating values to organizational behavior and to managerial practices (Becker and Connor 1979).

In spite of the increased interest, the subject of values has not received serious attention in human relations management (HR). Values may be discussed briefly in basic management texts in their treatment of changing organizational environments or in courses on business, government, and society. However, to our knowledge no pioneering effort in examining the role of values on the performance of volunteers, and specifically, the US based SCORE program, has ever been undertaken.

Values and Behavior

The examination of human behavior and the ability to predict an individual's performance is usually difficult at best to measure or show any causal relationship because many

behaviorally theories such as motivation, can be easily affected by the environment. As such, values are important for understanding various social-psychological phenomena (see review in Schwartz & Bardi, 2001) and generally, are more difficult to change or easily manipulate. There is considerable research which strongly suggests that the key elements in the understanding of human behavior are values and value systems.

Some researchers hold that values guide behavior and even include this guiding role in their definition of values (e.g., Allport, 1961; Rokeach, 1973). Others conclude that values guide behavior only rarely and not for most people (e.g., Kristiansen & Hotte, 1996; McClelland, 1985). Numerous empirical studies link values to behavior including work performance. Most of these, however, examine single behaviors (e.g., Rokeach, 1973; Schwartz, 1996) or sets of behaviors presumed to express one content domain of values (such as pro-social behavior or religiosity) (Bond & Chi, 1997; Schwartz & Huismans, 1995).

Rokeach has written that values provide standards that guide behavior. They are multifaceted standards which lead individuals to take particular positions on social issues, predispose a favoring of one particular political or religious ideology over another, guide representations of the self to others, and provide a basis upon which one may evaluate or judge. All persons possess the same values but to different degrees, the antecedents of which can be traced to culture, society, and its institutions. Behavioral differences among individuals, therefore, may be ascribed to the different priorities in which these values are held (Albert, 1968).

Rokeach has defined a *value* as being "an enduring belief that a specific mode of conduct or end-state of existence is preferable over any other specific mode of conduct or end-state of existence" (Rokeach, 1973). Thus, when it is said that a person has a value, the reference is to his or her beliefs concerning desirable modes of conduct or end-states of existence that is to *means* and *ends*, respectively. These two kinds of values are referred to as *instrumental*, or means-oriented, and *terminal*, or ends-oriented and Rokeach identified 18 values that fall into each category. Instrumental values include such values as *honest, love, responsible, and courageous*. Examples of terminal values include *freedom, equality, a world at peace and inner harmony*.

At the same time, Rokeach has defined a *value system* as being "an enduring organization of beliefs concerning preferable modes of conduct or end-states of existence along a continuum of relative importance" (Rokeach, 1973). Value systems are assumed to function as general plans employed to resolve conflicts and to make decisions.

Personal Values

Values convey what is important to us in our lives. Each person holds numerous values (e.g., achievement, benevolence) with varying degrees of importance. A particular value may be very important to one person but unimportant to another. Values are a motivational construct. They represent broad goals that apply across contexts and time (Rokeach, 1973; Schwartz, 1997; Schwartz & Bilsky, 1987, 1990). For example, giving importance to power values implies striving for power at work, at home, with friends, and so forth. People generally know what is important to them. Hence, when asked about their values, they can usually give reasonably accurate reports. People may act in accordance with their values even when they do not consciously think about them. Thus, values may operate outside of awareness but they are available for retrieval from memory. Values are relatively stable motivational characteristics of persons that change little during adulthood (e.g., Feather, 1971; Rokeach, 1973; Schwartz, 1997).

The Measurement of Values

The question of how to assess and measure values has received considerable attention. A review of the literature reveals that few, if any, consistently valid and reliable value measuring instruments exist. The Rokeach Value Survey is the product of many years of research regarding the nature, origins, and consequences of human beliefs, with its final thrust aimed directly at the concept of human values. The survey provides a basis for a systematic value approach to the study of human problems which, in many ways, overcomes deficiencies noted with respect to other value approaches.

The Rokeach Value Survey consists of two lists, one of 18 terminal values and the other of 18 instrumental values. Traditionally, the Value Survey required that each list be ranked in order of importance, with the respondent selecting the one value that is most important to him or her, then the next important value, and so on. Ranking of the two lists of values results in two hierarchies of value importance for each respondent, a terminal value system and an instrumental value system which compared to their productivity/performance can predict whether individual value profiles indicate a better fit between the employee and the organization. However, other approaches to Rokeach Value Survey have been used.

HR and Staffing

For several years staffing experts have been suggesting that an organization's human resource (HR) systems might be instrumental in the staffing decisions made by organizations and the job choice decisions made by applicants (e.g., Olian & Rynes, 1984; Rynes, 1992). Although this thesis is endemic to staffing research, it is particularly salient in discussions of using value profiles to determine individual performance and person-organization fit. Using strategic staffing principles in conjunction with value profiling can assist with recruiting and selection activities (Butler, Ferris & Napier, 1991).

Thus value profiling and strategic staffing activities lead to and better, more long-term human assets, not merely one to fulfill immediate operational objectives (Miller, 1984). Likewise, person-organization fit addresses the suitability or propriety of certain types of people in particular types of organizational environments, with the assumption that this match has long-term implications for organizational effectiveness (Schneider, 1987). Differences in HR systems presumably reflect the underlying nature of organizations, and therefore, in the staffing context, provide an environmental context for determinations of fit. This study examines whether values can predict overall performance in volunteer counselors in an economic development setting.

Methodology

SCORE, under the direction of the Center for Entrepreneurial Excellence (CFEE), conducted a survey of its volunteers using Milton Rokeach's Values Survey (1973). SCORE administered the survey online through Survey Monkey and included accepted performance criteria for ascertaining the effectiveness and efficiency of SCORE volunteer's performance outputs. Volunteers were also asked to provide demographic and descriptive data and evaluate the importance of terminal and instrumental values on scales of 1 (not very important) through 5 (extremely important). Of the 11,266 SCORE volunteers in existence during the fall of 2009, 2,057 (18.3%) responded. After the data were collected, SCORE matched each respondent with his or her performance and demographic information. Data were then analyzed using SPSS PC Plus version 17.0.

Data Analysis

Of the respondents, 87.4% were male, and 94.6% were white. A majority of the volunteers are clustered in the 61-75 age range, with only 8.7% of respondents younger than 55 and 8.5% over the age of 80. The average respondent served 5.7 years as a SCORE volunteer with 20.2% serving for less than one year. Nearly 72% of respondents labeled their employment status as “Retired,” and for these people, they had retired 8.8 years prior to the survey. Of the remaining respondents, 12.1% were still employed full-time and 12.5% were employed part-time. Attesting to their expertise at managing businesses, the average volunteer spent 17.3 years managing a small business and 23.6 years managing a medium to large business. Not that these questions were broadly worded and may reflect time serving in a managerial role rather than as the owner of such a firm. These results are consistent with the overall demographics of SCORE’s volunteers.

We next looked at the average productivity statistics for the respondents. For this study, SCORE defined long-term clients – one of the performance measures – as clients who utilized SCORE’s services for three or more hours. While the typical respondent volunteered 52 hours per month. However, the typical volunteer managed 2.9 long-term clients, largely due to the fact that 48.3% of the volunteers had no long-term clients, and an additional 14.1% had only one. Finally, although SCORE is a government funded organization, it still accepts donations to help promote the organization. Unfortunately for SCORE, the volunteers appear to be a poor source of such funding; the average donation or money raised was only \$13.60.

The Terminal Value Profile of SCORE Volunteers

From the survey results of the SCORE volunteers, we averaged each value. We noted that the overall average value given for all of the values was 4.1; as such, we considered any value with an average score within three-tenths of the overall average to be within normal parameters (3.8 to 4.3). Values beyond this range were considered either of extreme importance or low importance to SCORE volunteers as a group.

The average scores for all terminal values are provided in Table 1. Of all the values, the most important to SCORE volunteers are: family security (4.6), freedom (4.6), and self-respect (4.5), closely followed by a sense of accomplishment (4.4). These values speak to the current life stage of the volunteers, who are largely retired entrepreneurs. For many of them, they started and ran their businesses to support their families. The desire for freedom has been noted as a key motivation for entrepreneurs. A sense of accomplishment is closely related to the task orientation many entrepreneurs have. Self-respect ???

Table 1 – Average Scores for Terminal Values among SCORE Volunteers

Terminal Value	Average Score
A comfortable life	3.8
A sense of accomplishment	4.4
A world at peace	3.9
A world of beauty	3.6
An exciting life	3.9
Equality	4.0
Family security	4.6
Freedom	4.6

Happiness	4.3
Inner harmony	4.1
Mature love	4.0
National security	4.2
Pleasure	3.7
Salvation	3.3
Self-respect	4.5
Social recognition	3.4
True friendship	4.1
Wisdom	4.3

Table 1 also shows terminal values not of importance to SCORE volunteers are experiencing a world of beauty, pleasure-seeking, salvation, and social recognition. These are in-line with expectations of the mature generation who are self-motivated to do hard work without public reward.

The Instrumental Value Profile of SCORE Volunteers

To analyze the instrumental value profile of SCORE volunteers, we followed a similar procedure. From the survey results of the SCORE volunteers, we averaged each value. We noted that the overall average value given for all of the values was 4.1; as such, we considered any value with an average score within three-tenths of the overall average to be within normal parameters.

The average scores for all instrumental values are provided in Table 2. SCORE volunteers are mostly driven by being honest (4.7) and responsible (4.6) – two values that help explain their motivation to be counselors. Table 2 also shows that only one instrumental value stood out as not being of importance to SCORE volunteers: obedience. This is consistent with entrepreneurs, who often desire independence and handling issues their own way. This is not to say they will not follow direction, but rather entrepreneurs have a preference for being leaders and solving problems.

Table 2 – Average Scores for Instrumental Values among SCORE Volunteers

Instrumental Value	Average Score
Ambitious	4.1
Broad-minded	4.2
Capable	4.3
Cheerful	4.0
Clean	3.8
Courageous	4.3
Forgiving	4.0
Helpful	4.1
Honest	4.7
Imaginative	3.8
Independent	4.3
Intellectual	4.1
Logical	4.3

Loving	4.0
Obedient	3.5
Polite	4.1
Responsible	4.6
Self-Controlled	4.1

Confirmatory Factor Analysis

While these initial analyses helped define key characteristics of a typical SCORE volunteer value profile, we sought to find the value profiles that would explain the greatest levels of variance in the performance data. As such, we used confirmatory factor analysis with varimax rotation to create value profiles. The factors that resulted from the analysis names are:

1. Capable, Independent, Intellectual, Logical (“The Professional”) – These values are associated with competent workers, managers, or business owners; people who are able to tackle problems without being flustered; and sources of confidence and stability for a floundering small business.
2. Clean, Obedient, Polite, Self-Controlled (“The Boy/Girl Scout”) – These values indicate a person’s ability to relate to others in a pleasing manner. People with poor hygiene, who are rude, or who make sudden outbursts are less likely to be consulted for assistance
3. A world at peace, A world of beauty, Equality (“The Optimist”) – Counselors need to believe that their efforts are and will continue to make a difference. Pessimistic or defeatist attitudes demoralize clients, driving them away from SCORE.

Using these factors, we conducted a series of regressions with the performance measures as the independent variables and the values in the factors as the dependent variables. Based on our research, generational values take time to change – at least 10 years. As such, we ran the regressions reducing our age groups from five-year spans to the following: under 55, 55-65, 66-75, and older than 76. Our reference group for the discrete variables is a female volunteer under 55 years old, Pacific Islander / Native Hawaiian, who is not employed.

Table 3 – Performance results

Variable	Number of Long-term Clients	Number of Hours Volunteered per Month	Number of Years as a SCORE Volunteer	Dollars Raised or Donated
Constant	-0.698 (.667)	35.712 (0.123)	6.468 (0.000)	-12.357 (0.689)
A world at peace	-0.427 (0.013)	-4.645 (0.058)	0.166 (0.297)	-4.819 (0.141)
A world of beauty	0.090 (0.629)	-1.731 (0.513)	-0.289 (0.092)	0.817 (0.817)
Equality	0.331 (0.083)	3.018 (0.267)	-0.175 (0.324)	-3.112 (0.390)
Clean	0.002 (0.993)	1.611 (0.558)	0.282 (0.113)	0.739 (0.840)
Obedient	-0.535 (0.005)	-5.684 (0.037)	0.205 (0.244)	-5.966 (0.100)
Polite	-0.005 (0.985)	-0.316 (0.926)	-0.428 (0.052)	6.334 (0.162)

Self-controlled	0.115 (0.623)	-2.544 (0.446)	0.317 (0.144)	1.657 (0.710)
Capable	0.350 (0.177)	2.477 (0.502)	-0.243 (0.312)	10.854 (0.027)
Independent	-0.087 (0.709)	2.609 (0.430)	0.331 (0.123)	-6.169 (0.162)
Intellectual	-0.168 (0.471)	-3.141 (0.346)	-0.261 (0.226)	7.396 (0.096)
Logical	0.642 (0.008)	6.981 (0.044)	0.241 (0.285)	-3.824 (0.409)
Gender: Male	0.653 (0.097)	16.367 (0.004)	0.058 (0.873)	-2.993 (0.689)
Age: 55-65	-0.438 (0.354)	-9.545 (0.156)	-4.267 (0.000)	-6.007 (0.503)
Age: 66-75	-0.413 (0.244)	-10.195 (0.044)	-4.130 (0.000)	-11.144 (0.098)
Age: 76+	-0.565 (0.092)	-11.534 (0.016)	-3.491 (0.000)	-1.710 (0.788)
Race: White	2.056 (0.026)	6.487 (0.622)	0.474 (0.584)	16.453 (0.348)
Race: Black	0.856 (0.508)	-3.484 (0.850)	-1.134 (0.345)	10.011 (0.683)
Race: Hispanic	2.206 (0.161)	8.486 (0.705)	0.575 (0.693)	1.593 (0.957)
Race: Asian	0.596 (0.677)	1.463 (0.943)	-2.105 (0.117)	3.989 (0.883)
Race: Latino	0.249 (0.891)	10.666 (0.679)	-0.264 (0.878)	4.265 (0.901)
Retired	-0.117 (0.840)	5.644 (0.494)	0.589 (0.275)	-2.319 (0.833)
Employed full-time	-1.863 (0.840)	-23.044 (0.016)	-1.795 (0.004)	-16.480 (0.197)
Employed part-time	-1.098 (0.006)	-5.072 (0.016)	-0.669 (0.004)	-12.711 (0.314)
r ²	0.033	0.035	0.156	0.014
adjusted r ²	0.022	0.024	0.147	0.002

Key= Data in Bold significant at .05 or better level

For the number of long-term clients, only four values relate significantly. Volunteers who value a world at peace have fewer long-term clients, likely because interacting with people in chaotic and stress-filled lives (i.e., an entrepreneur having trouble with their business, a person attempting to determine whether to start a business, etc.) disrupts the peace the volunteer attempts to build. Obedience-driven volunteers also had fewer long-term clients. Since the SCORE program has little oversight—the volunteers are expected to be largely self-motivated—this result conforms to our expectations. On the other hand, the values with positive correlations are not as easy to explain. Valuing equality and being logical both correlate positively with the number of clients. The former, for example, may be due to the structure of the SCORE program, where clients often expect to be treated as peers seeking older colleagues' advice. Those preferring logical thinking are possibly enticed to interact with more clients by the fact that many problems require logical analysis of the situation and selection of the optimal solution.

Other results of note are that being male results in more long-term clients, white volunteers have more long-term clients than other races, being over 76 years old is correlated

with fewer clients, and working part-time decrease the number of clients by one, compared to an unemployed volunteer. The first two results we attribute to the general make-up of the SCORE volunteer population. In essence, SCORE's volunteer base comprises a large number of white males, meaning other races and female volunteers may feel like outsiders, not participating as much as their counterparts. We would expect to slow down with age, as the data confirm. And working necessarily limits the time available to handle clients.

These conclusions are reinforced in the results for the number of hours volunteered each month. Older volunteers contribute fewer hours than their younger counterparts, and males volunteer over 16 hours more than females. Furthermore, full-time volunteers show a marked decrease in the number of hours volunteered. The value results are also consistent: both seeking a world at peace and valuing obedience decrease the number of hours volunteered, while favoring logic increases the number of hours.

The number of years as a SCORE volunteer called out several interesting facts. The first is that SCORE is doing a good job retaining its younger volunteer base. Compared to volunteers aged 55 or younger, volunteers in all other age categories could not claim as much seniority. Not surprisingly, working volunteers were more likely to have spent less time as a SCORE volunteer, likely because the demands of working and volunteering are too great to allow long-term involvement with both. As noted before, valuing a world of beauty disinclines volunteering with SCORE; in addition, valuing politeness leads to less seniority with SCORE. We theorize that this may be due to the fact that volunteers are regularly dealing with people in high-stress situations—a scenario that may lead to sometimes uncivil behavior.

The final performance criteria we looked at was the amount of money raised or donated by the volunteers. Volunteers valuing both capability and intellectualism contributed more to SCORE, while those who value obedience contributed less. The latter result follows from SCORE not explicitly asking for money from its volunteers; without guidance, obedient people are likely to not provide a given result. On the other hand, volunteers valuing being capable likely recognize the extent to which SCORE builds such ability in its clients, thereby driving their contributions. Intellectual volunteers may be driven to contribute to SCORE by the intense challenges they often face and the in-depth discussions entrepreneurial counseling requires. The only other significant result is that older volunteers, specifically those 66-75 years old, contribute fewer dollars than their counterparts. Given their reduced participation in SCORE and that many of them are living on fixed incomes, such findings are not altogether unexpected.

As interesting as the results of the regressions are, we must note one limitation. All of the regressions have very low adjusted r^2 values, indicating that the hypothesized connection between values and these particular performance criteria is limited. However, this does not invalidate further exploration into the realm of values and volunteer performance; rather it suggests two possible methods by which greater explanatory power may be gained. First, the performance criteria chosen may need to be refined. Many volunteers did not contribute to SCORE—the average contribution per volunteer was only \$13.60—meaning that the criteria of dollars raised or donated may not be the best choice. This conclusion is further reinforced by the adjusted correlation coefficient of .002.

The second area of possible improvement is using an alternative mechanism for measuring value profiles. The survey for this study asked volunteers to rank values on a Likert scale of 1 to 5. However, understanding the relative importance of a given value out of all the values can potentially yield greater insight and explanatory power than a Likert scale, given the large number of values. On the other hand, using a forced ranking of 18 terminal and

instrumental values requires greater time, leading to a lower survey completion rate.

Conclusion

Predicting a volunteer's performance based on examining their value profile shows that more work is needed. Organizations employing volunteers must clearly articulate definitive goals and objectives so that all volunteers are cognizant of what is required. In this study, we examined one of the world's largest volunteer organizations supporting the development and creation of small and medium enterprises (SMEs) – SCORE. Based on the analysis of the data, SCORE needs to develop training programs designed to encourage counselors to become more active and involved. The goal of this training will be to enhance the counseling the volunteers offer. In addition, it helps standardize the quality of the volunteers, driving up their performance.

Another benefit is that volunteers, upon “graduating” from their training, will feel much more confident in their abilities, meaning they will be more likely to be active participants in SCORE. Current volunteers should be offered the choice between a self-driven program that currently exists and the opportunity to work through the training. Alternatively, under-performing counselors could be encouraged to complete such training.

SCORE also needs to develop clear goals and objectives, which they may already possess, and clearly communicate these regularly to all SCORE volunteers. In order to predict productive SCORE counselors, one needs to have the criteria articulated and reinforce. Annual reviews may yield a more productive group of volunteers.

SCORE should capitalize on tenured counselors by asking them to mentor and assist in the training new counselors. The data indicates that more senior SCORE counselors understand and participate more actively in assisting small businesses. Once the volunteer agrees to counsel for SCORE they remain a counselor an average of 5.7 years. So if SCORE wants to get more diversity among its counselors in terms of age, gender, race and experience, they should target younger individuals

Develop a recognition and incentive program for your volunteers, preferably one centered on the values that match their values profile, both terminal and instrumental like offering more responsibility to highly qualified volunteers.

References

- Allport, G. W. (1961). *Pattern and growth in personality*. New York: Holt, Rinehart & Winston.
- Bem, D. J. (1972). Self-perception theory. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 6, pp. 1-62). New York: Academic Press.
- Bond, M. H., & Chi, V. M. Y. (1997). Values and moral behavior in Mainland China. *Psychologia*, 40, 251-264.
- Butler, J.E., Ferris, G.R. & Napier, N.K. (1991). *Strategy and human resources management*. Cincinnati, OH: South-Western.
- Carver, C. S., & Scheier, M. F. (1981). *Attention and self-regulation: A control-theory approach to human behavior*. New York: Springer-Verlag.
- Feather, N. T. (1971). Organization and discrepancy in cognitive structures. *Psychological Review*, 78, 355-379.
- Kluger, A. N., & DeNisi, A. (1996). The effects of feedback interventions on performance: Historical review, A meta-analysis and a preliminary feedback intervention theory. *Psychological Bulletin*, 119, 254-284.

- Kristiansen, C. M., & Hotte, A. M. (1996). Morality and the self: Implications for when and how of value-attitude-behavior relations. In C. Seligman, J. M. Olson, & M. P. Zanna (Eds.), *The Ontario Symposium: Vol. 8. The psychology of values* (pp.77-106). Hillsdale, NJ: Lawrence Erlbaum.
- Kristiansen, C. M., & Zanna, M. P. (1994). The rhetorical use of values to justify social and intergroup attitudes. *Journal of Social Issues, 50*, 47-65.
- McClelland, D. C. (1985). *Human motivation*. Glenview, IL: Scott, Foresman.
- Miller, F. (1984). Strategic staffing. Pp 57-68 in C.J. Fombrun, N.M. Tichy & M. A. Devanna (Eds.), *Strategic human resources management*. New York: Wiley.
- Olian, J.D. & Rynes, S.L. (1984). Organizational staffing: integrating practice with strategy. *Industrial Relations, 23*: 170-183.
- Rokeach, M. (1973). *The nature of human values*. New York: Free Press.
- Rosenthal, R. (1991). *Meta-analytic procedures for social research*. London: Sage Ltd.
- Rokeach, M. (1968). Beliefs, attitudes, and values. San Francisco: Jossey-Bass.
- Rokeach, M. (1979). Understanding human values. New York: Free Press.
- Schneider, B. (1987). The people make the place. *Personal Psychology, 40*: 437-453.
- Schwartz, S. H. (1996). Value priorities and behavior: Applying a theory of integrated value systems. In C. Seligman, J. M. Olson, & M. P. Zanna (Eds.), *The Ontario Symposium: Vol. 8. The psychology of values* (pp. 1-24). Hillsdale, NJ: Lawrence Erlbaum.
- Schwartz, S. H. (1997). Values and culture. In D. Munro, S. Carr, & J. Schumaker (Eds.), *Motivation and culture* (pp. 69-84). New York: Routledge.
- Schwartz, S. H., & Bardi, A. (1997). Influences of adaptation to communist rule on value priorities in Eastern Europe. *Political Psychology, 18*, 385-410.
- Schwartz, S. H., & Bardi, A. (2001). Value hierarchies across cultures: Taking a similarities perspective. *Journal of Cross Cultural Psychology, 32*, 268-290.
- Schwartz, S. H., & Bilsky, W. (1987). Toward a universal psychological structure of human values. *Journal of Personality and Social Psychology, 53*, 550-562.
- Schwartz, S. H., & Huisman, S. (1995). Value priorities and religiosity in four Western religions. *Social Psychology Quarterly, 58*, 88-107.

Firm size, age, industrial networking and firm growth: A case of the Korean manufacturing industry

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The role of small and young firms in the economic growth has been of critical interest to policy-makers for many decades. Numerous studies are inspired by Gibrat's "law of proportionate effect" (Gibrat, 1931) and find that smaller, younger firms are more likely to grow faster than larger, older firms in terms of the number of employees or amount of sales (Dunne and Hughes, 1994; Evans, 1987a, b; Geroski, 1995; Hall, 1987; Harhoff, et al., 1998; Hart and Oulton, 1996; Liu, et al., 1999; McPherson, 1996; Weiss, 1998; Yasuda, 2005). The second set of determinants of firm growth considered in the succeeding studies of Mansfield (1962) includes strategic behaviors of firms such as R&D and exporting activities (Doms et al., 1995; FitzRoy and Kraft, 1991; Hall, 1987; Yasuda, 2005).

The previous studies on firm growth, however, have paid relatively little attention to the effect of *industrial networking* and even fewer studies address the experience of newly industrialized economies (henceforth, NIEs).

Track: 10. New Venture Creation and SME Growth

Growth Aspirations as a Function of Entrepreneurial Perceptions and Motivation

by D.Kelley and H.Lee¹

This research examines why entrepreneurs seek growth for their ventures. We develop and test a motivation perspective to determine if the motivation to improve one's life through greater income or independence is associated with an entrepreneur's aspirations for growth. We also develop an opportunity perspective to test whether characteristics of the opportunity can impact an entrepreneur's judgment about the growth potential for the venture. We build and test hypotheses based on this research question, drawing on data from 196 entrepreneurs participating in the 2008 Global Entrepreneurship Monitor survey in the Republic of Korea. Our research finds that growth requires greater challenges. And growth aspirations are also associated with the belief that efforts will lead to successful outcomes.

Introduction

Both governments and the private sector can benefit from understanding and promoting entrepreneurship (Kor, et al., 2007). New, small ventures have shown themselves to be key contributors to a nation's overall economic growth (Kirchhoff, 1994; Davidsson et al., 2002). Ventures with growth potential are of particular interest to policy makers because higher growth offers greater employment prospects and investment returns. This potential can be detected in entrepreneurial aspirations for growth, which, according to several studies, is likely to lead to actual growth (Baum et al., 2001; Wiklund and Shepherd, 2003). Entrepreneurial growth aspirations are therefore a useful area of study for entrepreneurship scholars.

This research examines why entrepreneurs seek growth for their ventures. We test two explanations with this inquiry. The first argues that the entrepreneur is motivated by the personal

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benefits expected from growing one's firm. The second advances the position that an entrepreneur believes she can achieve high growth because she has an innovative opportunity that is competitively unique. We view this study from an expectancy theory viewpoint (Vroom, 1964). The basic premise is that people consider the potential results of their actions when making decisions. These decisions are based on the probability particular outcomes can be achieved and on the desirability of the outcomes to the entrepreneur (Gatewood, 1993).

The first perspective views personal motivation as the main driver in the pursuit of growth. Different individuals place different value on the same outcome (Gatewood, 1993). One reason for this is due to the second-order effects. More specifically, entrepreneurs may have growth aspirations because this would lead to the fulfillment of personal goals. We could thus surmise that those with particular motivations will have a different perception of growth. The expected outcomes in this case, are related to greater personal financial rewards or independence (Davidsson, 1989). Entrepreneurs may therefore seek growth because they enjoy the higher income and independence offered, compared to alternatives such as employment in established organizations.

The second, opportunity-centered, pursuit of growth arises from the assumption that expectancy in achieving an outcome helps influence the decision to aspire to that outcome (Vroom, 1964; Katzell and Thompson, 1990). It is Schumpeterian in the sense that growth may arise out of opportunities to benefit from significant change. These opportunities represent a high level of newness, and are initiated by producers, who teach consumers to want new things (Schumpeter, 1961). Innovative opportunities therefore offer the potential for bigger gains. As a consequence, entrepreneurs are more likely to have growth aspirations when they have innovative opportunities that make this possible.

This leads to our main research question: do entrepreneurs seek growth because of their personal motivations, because they have innovative, unique opportunities, or both? We build and test hypotheses based on this research question, drawing on data from 196 entrepreneurs participating in the 2008 Global Entrepreneurship Monitor survey in the Republic of Korea. We propose there are two key drivers of growth expectations: (1) the entrepreneur's motivation (in particular, opportunities for greater income and independence), and (2) the perception of the opportunity (more specifically, its market and technical novelty), and the competitive environment for this opportunity. This research is valuable to academic research in contributing to our understanding about the drivers of entrepreneurial growth ambitions. For policy makers, it offers implications for selecting and motivating growth-oriented entrepreneurs.

Growth Aspirations: A Function of Personal Motivation or Perception of Opportunity?

A number of authors recognize that entrepreneurial actions result from motivational and cognitive factors (Shane et al., 2003; Arenius and Minniti, 2005; Tominic and Rebernik, 2007). Research on human cognition has shown that cognitive processes are not totally rational, but are influenced by a number of sources, with potential bias and error. This is expected to be even more evident in entrepreneurs, who are typically overloaded with information and operating under conditions of uncertainty, novelty, and the need for timely action (Baron, 1998). Perceptions are therefore not objective observations; they are influenced by one's particular orientation (Pfeffer and Salancik, 1978).

Because people differ from each other, they have varying propensities for acting on opportunities (Shane et al., 2003). Their goals are linked to the choices they make with regard to

entrepreneurial opportunities (Arrow, 1974). Entrepreneurs exhibit diversity in their foresight and the confidence they have in their judgments, and their ability and inclination to act on these judgments (Knight, 1964). Entrepreneurs can therefore make particular decisions about opportunities because they have different motivations, opinions and interpretations (Shane et al., 2003). As a consequence, the rate of growth entrepreneurs pursue for their ventures can reflect their perceptions and motivations. By studying the sources of these perceptions, we can better understand the path a firm will take under uncertainty (Kor et al., 2007). We next draw from the entrepreneurship literature and expectancy theory in developing hypotheses about motivations and perceptions about an opportunity, and their association with growth aspirations. The overall research framework is illustrated in Figure 1.

The Motivation Perspective

Expectancy theory states that human behavior can be explained as a function of the belief that efforts will lead to successful outcomes and the extent these outcomes are themselves valued, or because they will lead to other desired outcomes (Vroom, 1964; Gatewood, 1993). Expectancy theory has been used in the entrepreneurship literature to explain growth aspirations. Davidsson (1989) looked at the link between motivations and growth willingness in his survey of 400 Swedish entrepreneurs. Wiklund et al. (2003) surveyed 200 Swedish entrepreneurs, examining the connection between aspirations and actual growth. They also studied the effect of the entrepreneur's education and experience, and environmental dynamism on this relationship. Manalova et al. (2007) compared 544 men and women entrepreneurs in Bulgaria on the impact of human capital and networks on growth expectancies

From an expectancy theory perspective, the perceived value of the same outcome will differ among individuals, and this may be due to potential second-order outcomes. For example, growth may have value for entrepreneurs because it can help them achieve greater independence and income (Gatewood, 1993), compared to other alternatives. Growth is accompanied by greater challenge, yet this is weighed against the attraction of the outcomes it offers. People with higher goals have higher standards and the need to accomplish more (Locke and Latham, 1990). They may therefore strive for greater achievements with their ventures. Baum et al. (2001, p. 299) similarly suggest a link between motivations and growth in describing a high growth entrepreneur: 'This entrepreneur is highly motivated, which is reflected in a clear organizational vision, high growth goals, and confidence in achieving these goals.' Entrepreneurs expect the gains from their businesses to offset the risks they take (Rumelt, 1987).

Theoretically, we could conclude that entrepreneurs with motivations to improve their lives through more independence or higher income are likely to have growth aspirations for their ventures. The entrepreneurship literature would concur. Baum et al. (2001), in their survey of 307 CEOs of architectural woodwork manufacturers found no link to actual growth for environmental factors such as those relating to predictability, resources, and number of competitors, suggests that CEOs may have more control over their ventures growth than some macro theories suggest. Similarly, in attempting to understand what distinguishes growth economies from more stagnant ones, Baumol (1968) emphasizes the importance of understanding the availability and motivations of entrepreneurs.

Motivations influence people's decisions about their opportunities, and variance in these motivations will influence who undertakes entrepreneurship and how (Shane et al., 2003). Human motivation is therefore a key determinant in the decision to become an entrepreneur (Baron, 2002). Some studies suggest that independence, along with other nonfinancial motivators

like workload, control, and challenge, were the most important determinants in one's decision to become an entrepreneur generally (Cliff, 1998; Amit et al., 2000; Cassar, 2007). Amit et al. (2000), in their in-depth interviews with 51 entrepreneurs and a control group of 28 nonentrepreneurs, found that wealth attainment was significantly less important in entrepreneurs' decisions to start ventures, compared with other decision dimensions, such as challenge and independence. But they did believe they had a greater chance to attain their wealth goals through their ventures, compared with alternative career paths.

When examining entrepreneurial growth aspirations in particular, however, higher income was found to be a stronger predictor than independence (Cassar, 2007; Hessels et al., 2007). Cassar (2007) found in his analysis of survey data from the Panel Study of Entrepreneurial Dynamics (PSED) that the importance an entrepreneur places on financial success was a key determinant in explaining both growth intentions and achieved growth, but independence was negatively associated with intended and actual growth. He uses the results to point out that the effectiveness of policies aimed at fostering high growth entrepreneurship need to recognize that the importance of financial incentives in entrepreneurial aspirations.

On the other hand, there is yet evidence to support nonfinancial motives, or at least a combination of the two. Kolvereid (1992), in his study of 250 Norwegian entrepreneurs, that entrepreneurs with growth aspirations were more likely to have started their business to achieve something and contribute to the welfare of people and family, compared to other entrepreneurs. Davidsson (1989) found that it is both expectations of financial rewards and increased independence that are key motivators in growth aspirations.

Although there are a number of motivations that can inspire entrepreneurs, this study narrows in on two improvement-driven motivations: income and independence. Independence can be defined as assuming greater responsibility for one's own life and decisions (Shane et al., 2003). While empirical evidence exhibits a range of results relative to the types of motivations and their relationship to growth, or particular focus on improvement-driven motives and our expectancy theoretical lens would suggest that those seeking growth are more likely to value the improvement in income or independence this offers. This leads us to our first hypothesis:

H1: Improvement-driven motivation will be associated with growth aspirations.

The Opportunity Perspective

From an expectancy theory perspective, individuals weigh the perceived effort needed to achieve their desired results and the belief their efforts will achieve these results (Gatewood, 1993). These efforts and the ability to achieve desired results may depend on the entrepreneur. Prior studies have examined the impact of personal characteristics, such as human capital (Davidsson, 1991; Baum et al., 2001; Manalova et al., 2007), self-efficacy (Baum et al., 2001; Baum and Locke, 2004; Tominic and Rebernik, 2007), and social networks (Manalova et al., 2007) on firm growth or growth aspirations. These characteristics can be conceptualized as resources. Resources affecting expectancy, the probability that a particular effort will achieve an outcome. These are not just personal, however, but also material, like technology (Katzell and Thompson, 1990). This research focuses on the latter: resources relating to the opportunity itself. More specifically, we examine the level of innovativeness of the opportunity and the level of competitive uniqueness it offers.

Innovativeness. Entrepreneurship has long been regarded as involving the creation of something new, and therefore different, from existing businesses (Drucker, 1985; Rumelt, 1987). Entrepreneurs, according to Drucker (1985) search for, respond to, and exploit change. They use innovation to do this, resulting in opportunities for different businesses or services. Schumpeter (1961) conceptualizes entrepreneurs as carrying out new combinations, creating new needs in customers, compared to what they are accustomed to using. The degree of newness is linked to its innovativeness, which has both technical and market dimensions.

Innovation involves the commercialization or bringing into use of new technologies (Schon, 1967; Tushman and Nadler, 1986; Zahra, Nash, and Bickford, 1995). Technological innovation results in major new inventions or combinations of previously unrelated technologies which create technological discontinuities, and form a new paradigmatic base for technology development (Martin, 1984). Innovation can thus be characterized as the extent a technology has not previously been embodied in a firm's current products (Roberts and Berry, 1985). In addition, innovation creates new consumption patterns in a market (Robertson, 1967; Gobeli and Brown, 1987; Kozmetsky, 1993). These new market applications are undeveloped at the outset (Betz, 1993), and the market is unfamiliar with the application (Roberts and Berry, 1985).

While innovative opportunities carry greater risk and cost, they also offer the prospects of greater returns. As Kim and Mauborgne (2005) report, only 14percent of the business launches they studied in 108 companies were aimed at creating new markets; the rest were extensions of current offerings. These new businesses, however, were responsible for 38percent of total revenues and 61percent of the total profits delivered by these launches. High performance can therefore be achieved with innovative opportunities. While innovation presents a greater level of challenge for an entrepreneur, it carries higher expectations of success, which can lead to better performance (Locke and Latham, 1990).

There is some evidence that more rapidly growing firms emphasize technological change (Gundry and Welsch, 2000). This current study examines the association between perceptions of innovativeness and growth aspirations. From an expectancy viewpoint, entrepreneurs with more innovative opportunities are likely to seek growth for their firms because they believe these efforts, applied to their innovative opportunities, are likely to achieve their growth aspirations. In addition, given that a high level of innovativeness involves great risk, it follows that entrepreneurs would expect greater returns for such opportunities. We therefore predict that opportunities perceived by the entrepreneur as involving a higher level of innovation will be associated with greater growth aspirations. This leads us to first predict the following:

H2a: An entrepreneur's perception of the level of innovativeness of the opportunity will be associated with growth aspirations.

Competitive Uniqueness. While innovation can be measured in terms of technological and market newness, it can also be represented to the extent it is considered new within the industry. An innovation, after all, involves the first or early use of a significant new technology in an industry (Hage, 1980; Gobeli and Brown, 1987). Innovations can therefore be judged with respect to the extent they are not currently offered by competitors (Gobeli and Brown, 1987). This suggests that competitive uniqueness has roots in the level of innovativeness of an opportunity.

But the environment itself may also weigh in. In disequilibrium markets, there are more opportunities to gain advantage, and individuals alert to opportunities others have not noticed can

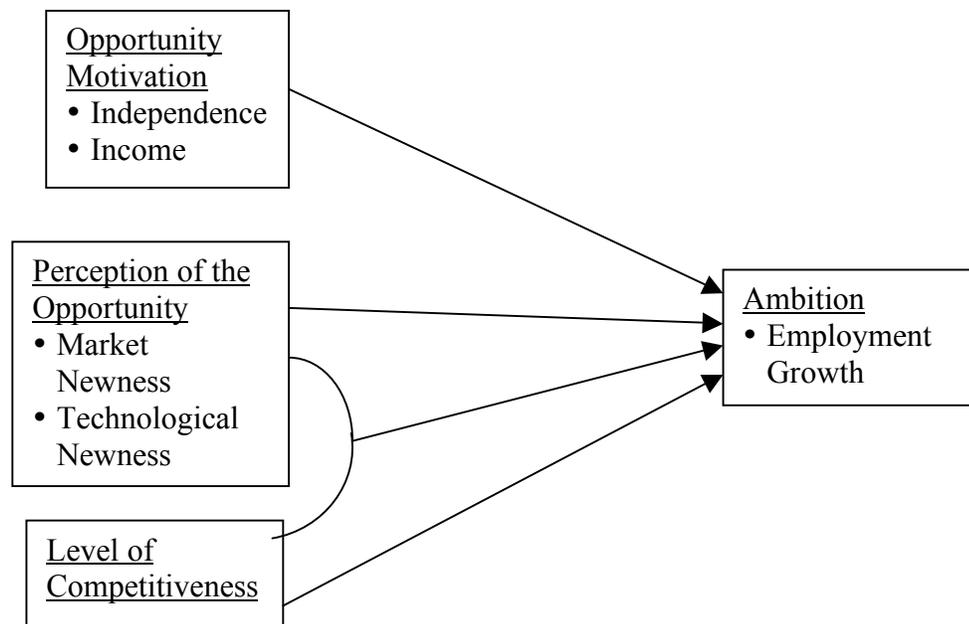
profit from entrepreneurial activity before a competitive response (Kirzner, 1973). As Gatewood (1993) indicates, environmental variables can impact expectancy judgments. Baum et al. (2001) used a measure of complexity, which assessed the concentration or dispersion of competitors in the environment. They proposed that complex environments, comprising many firms, may be difficult for entrepreneurs to comprehend. They did not find a link to actual growth for this factor, however.

Competitive uniqueness may be due to either the environment or to characteristics of the opportunity. We propose that one's basic perception of few competitors for an opportunity will lead to higher growth aspirations. We also hypothesize there will be an interaction effect of competitive uniqueness and innovativeness on growth ambitions. This is based on the assumption that the characteristics of the opportunity, a higher level of innovativeness and competitive uniqueness, will lead entrepreneurs to believe their efforts are likely to produce these outcomes.

H3a: An entrepreneur's perception of the competitive environment for the opportunity will be associated with growth ambitions.

H3b: An entrepreneur's perception of the innovativeness of the opportunity and the competitive environment will have a positive interaction on growth ambitions.

Figure 1. Research Framework



Research Method

Data

To test our study's hypotheses, we used data from the 2008 Global Entrepreneurship Monitor

(GEM) survey of the adult population in Republic of Korea. The GEM survey was developed to estimate national entrepreneurial activity. More detailed background on GEM can be found in Reynolds et al. (2005).

Our paper focuses on early stage entrepreneurs. These are identified as individuals who are personally involved in the creation of a new business or who are owner/managers of new firms less than 42 months old. The GEM survey distinguishes those individuals who are nascent entrepreneurs, who have taken some action towards creating a new business and have not paid wages for more than 3 months, and new entrepreneurs who are employed as owners/managers of new businesses which haven't paid wages or salaries for more than 42 months. These two groups compose the Total Entrepreneurial Activity (TEA) measure for a country. Using this criteria, 196 early stage entrepreneurs from 2,000 random samples were identified.

Measures

Growth ambition. This is a dichotomous variable that identifies, among the sample of early stage entrepreneurs, those with growth ambitions. Growth ambition is measured in terms of expected employee growth. Survey items determined both the number and percentage increase in employees the entrepreneur expects in 5 years. It was coded 0 when there was no expectation of job growth and 1 when the respondents expect to add more than 10 persons and 50 percent growth of employment in five years.

Perception of the opportunities. This measure assesses the perceived innovativeness and competitiveness of the opportunity. Innovativeness was measured in terms of the perception of market newness and technological newness. To measure market newness, we asked respondents whether potential customers would consider the product or service new and unfamiliar. Responses were coded with a '1' if respondents indicated that some or all considered the product or service new and unfamiliar.

For technological newness, we asked to respondents whether the technologies or procedures required were generally available more than a year ago. A category scale was used for the answer as follows: 1 = very latest technology, available less than a year, 2 = new technology (1 to 5 years), 3 = technology older than five years.

A measure of the level of competitiveness in the market was indicated by asking respondents whether many businesses were offering the same products or services. Responses were coded '1' if no or few businesses offered competing products.

Opportunity motivation. The motivations for participating in entrepreneurship may vary among individuals starting businesses (Reynold et al., 2005). Some are attempting to take advantage of new business opportunities. Others are involved because they cannot find other suitable income sources – in other words, creating a new business is their best available option. This research focuses on entrepreneurs who were starting their business for the purpose of improving their lives through either increased independence or income. Responses were coded '1' if the respondent indicated this reason in the survey.

Statistical Control Variables. Three variables were included as statistical controls in our analysis because of their potential impact on growth ambition: participation in the technology sector, respondent's age, and gender. Participation in technology sectors can lead firms to believe there are major opportunities for growth and innovation (Hansen and Hill, 1991; Zahra et al., 2000). Technological sectors provide abundant technological opportunities, which lead to growth

expectations by entrepreneurs (Scherer, 1980). Respondents were asked what business they operated in, and this was coded by a trained data assistant on the GEM central coordination team, who coded all surveys across the entire GEM dataset.

Respondent age was included because younger entrepreneurs tend to show higher growth aspirations than those in older age groups (Schott and Bager, 2004). Respondents were asked to provide their year of birth. For the third control variable, we asked the respondents' gender.

Analysis and Results

Table 1 presents the means, standard deviations, and intercorrelations among our study's variables. All variables have a strong correlation ($p < .05$) with growth ambitions. Correlations among the independent variables, while significant in some cases, were low or moderate.

Table 1. Intercorrelations among the study's variables (n=196)

Variables	Mean	s.d.	1	2	3	4	5	6	7
1. Growth Ambitions	.20	.40							
2. Opportunity Motivation	.52	.50	.314**						
3. Market newness	2.34	.67	-.274**	-.245**					
4. Technological Newness	2.61	.70	-.333**	-.194**	.251**				
5. Level of competitiveness	1.34	.59	.286**	.198**	-.279**	-.332**			
6. Participation in the technology sector	.08	.26	.080	-.086	-.122	-.073	.048		
7. Age	39.21	12.58	-.033	-.138	-.010	-.077	.006	-.006	
8. Gender	1.50	.50	-.122	.038	.125	-.057	-.042	-.089	-.010

** Correlation is significant at the level of .01 level (2-tailed).

Binominal logistic regression was used to test the hypothesis, since our dependent variable is a binary variable. Binominal logistic regression extends the techniques of multiple regression analysis to contexts where the outcome variable is categorical. It is therefore an appropriate analysis method for testing our response variable: growth ambitions. We first ran an analysis to test for the direct relationship between opportunity motivation and our dependent variable, growth ambition.

Table 2. Results of Logistic Regression Analysis: Effects of Opportunity Motivation on Growth Ambition

	B	S.E	Wald	Df	Sig.	Exp (B)
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Opportunity Motivation	1.858	.451	16,952	1	.000	6.414
Gender	.944	.497	3.613	1	.057	2.571
Constant	-3.289	.589	31.151	1	.000	.037

Model Chi-Square 24.556 (Sig .000)
-2 Log Likelihood 172.418
Hit Ratio 79.3percent

Table 2 shows the results for the first hypothesis. H1, which predicted a positive relationship between opportunity motivation and growth ambition, was supported ($p < .05$).

Next, we used logistic regression analysis to test for the direct effect of perception of the opportunity and growth ambition. A backward approach was conducted to determine, among two variables, which were the most predictive in the case of growth ambition. Table 3 shows the results of this analysis. H2, which suggested a positive relationship between perception of the opportunity and growth ambition, was supported for both market and technological newness ($p < .01$).

Table 3. Results of Logistic Regression Analysis: Effects of Perception of the Opportunity on Growth Ambition

	B	S.E	Wald	Df	Sig.	Exp (B)
Market newness	-.768	.293	6.881	1	.009	.464
Technological newness	-.944	.249	14.400	1	.000	.389
Gender	.943	.534	3.120	1	.077	2.567
Constant	1.919	.889	4.666	1	.031	6.816

Model Chi-Square 30.867(Sig .000)
-2 Log Likelihood 167.489
Hit Ratio 82.1percent

Finally, we ran an analysis with a backward stepwise approach, to test the effect of level of competitiveness and the interaction effect of level of competitiveness on the relationship between the perception of the opportunity and growth ambition. As Table 4 shows, the model's explanation rate was 82.9percent, which means our model's categorization is good enough to classify growth ambition. H3a, which predicted an association between the extent there were no or few competitors for the product or service, was supported ($p < .0001$). H3b predicted an interaction effect of opportunity and competitiveness; this was only supported in the case of technological newness, showing partial support for H3b.

Table 4. Results of Logistic Regression Analysis: Effects of the level of competitiveness on Growth Ambition and the level of competitiveness' interaction effect (backward method, Wald)

	B	S.E	Wald	df	Sig.	Exp(B)
Opportunity Motivation	-1.673	.484	11.940	1	.000	.188
Level of Competitiveness	2.079	.501	17.236	1	.000	8.00
Interaction Effect Technological Newness X Level of Competitiveness	-.646	.182	12.626	1	.000	.524
Gender	1.106	.545	4.124	1	.042	3.022
Constant	-2.396	.708	11.453	1	.001	.091

Model Chi -Square 48.163 (Sig .000)
-2 Log likelihood 146.811
Hit Ratio 82.9percent

Discussion

Our research finds support for both the motivation and opportunity perspective. It can be explained through an expectancy perspective as follows. Growth requires greater challenges, and this is weighed against possible outcomes. Those with higher goals (income, independence) also have the need to accomplish more (Locke and Latham, 1990). This provides the motivation for growth aspirations, which are expected to result in the fulfillment of these goals. Growth aspirations are also associated with the belief that efforts will lead to successful outcomes (Vroom, 1964; Gatewood, 1993): in this case, when one has an innovative opportunity with few competing options. The effect of low competition is also strengthened when the opportunity has high technological newness.

Entrepreneurship researchers have deemed motivation to be critical in the decision to become an entrepreneur (Baron, 2002; Shane et al., 2003). Our findings start from the standpoint of one that has already made this decision, but is projecting the level of growth for the venture. The results suggest that growth entrepreneurs, from an expectancy perspective, are motivated by the greater income and independence expected from growing one's firm (Vroom, 1964; Gatewood, 1993). In addition, as Locke and Latham (1990) indicate, people with higher goals have higher standards and the need to accomplish more. We can infer that people with high income and independence goals set their standards higher for their ventures.

Some research indicates that independence is the more significant determinant in one's decision to become an entrepreneur generally (Cliff, 1998; Amit et al., 2000). With respect to growth, however, the opposite has been found; in that case, income is the key driver (Cassar, 2007; Hessels et al., 2007). In fact, Cassar (2007) found a negative association between independence and growth. Our results are consistent with Davidsson (1989), who found that both expectations of financial rewards and increased independence are key motivators in growth aspirations. We found only a combined effect of these two variables, which could indicate that they go hand-in-hand, where both are expected outcomes of growth.

While prior studies have looked at human and social capital effects on growth (Davidsson, 1991; Baum et al., 2001; Baum and Locke, 2004; Manalova et al., 2007; Tominic and Rebernik, 2007), we examined the impact of perceptions of the opportunity. Our findings support the view that resources can affect expectancy, and these are not just personal, but also material (Katzell and

Thompson, 1990). Individuals weigh the perceived effort needed to achieve their desired results and their decisions reflect the belief their efforts will lead to successful outcomes (Vroom, 1964; Gatewood, 1993). Innovation carries higher expectations of success, which can lead to better performance (Locke and Latham, 1990; Kim and Mauborgne, 2005). Our findings thereby indicate that an innovative opportunity, from a market and technology perspective, may contribute toward one's aspirations for growth.

This opportunity perspective also finds support with respect to the competitive environment, which is strengthened through the interaction with technological newness. As Gatewood (1993) indicates, environmental variables can impact expectancy judgments. Where there are few competitors for an opportunity, it may increase an entrepreneur's belief that efforts will lead to successful outcomes (Vroom, 1964; Gatewood, 1993). The presence of few competitors could be due to the innovativeness of the opportunity or a condition in the environment. In other words, there could be less competition because the technology has not been adopted by rivals, or because the geographic region or industry is not populated with intense competition. That we found an interaction effect with technological newness and competition supports the first explanation.

However, given competition exhibits an independent effect, we should keep in mind the evidence that choice of industry plays a key role in growth ambitions. While Baum et al. (2001) did not find a link to actual growth for their variable measuring number of competitors in the environment, Scott Shane argues that the odds a business will experience high growth depends in large part on industry. As an example, he cites the fact that an entrepreneur operating in the computer industry has a far greater chance of making the Inc. 500 than one starting a hotel/motel business.ⁱ With a perception of fewer competitors for one's product, an entrepreneur may see the potential for profits before rivals notice and respond (Kirzner, 1973). Perhaps the interaction effect with technological newness indicates that technologically innovative, competitively unique opportunities are even more likely to provide growth potential.

Conclusions

This study has applied an expectancy theory perspective to the examination of entrepreneurial growth ambitions. We develop and test a motivation perspective to determine if the motivation to improve one's life through greater income or independence is associated with an entrepreneur's aspirations for growth. We also develop an opportunity perspective to test whether characteristics of the opportunity can impact an entrepreneur's judgment about the growth potential for the venture. While prior studies have tested the impact of human and social capital on growth ambitions, we examined human motivational factors. In addition, while human and social capital may be represented as a resource, innovative opportunities could also serve as a resource that could impact growth potential. The implications for theory and literature on entrepreneurial growth lies with our finding that human motivation can play an important role in expectancy models. The opportunity is also important to the extent it is perceived as innovative and competitively distinct.

The importance of motivation and opportunity to growth ambitions also has implications for policy makers. For countries providing support to entrepreneurs with growth potential, it might be wise to focus on identifying motivated individuals and developing their ability to assess innovative opportunities with attractive competitive characteristics. A motivated entrepreneur in a good industry may more likely reach high potential with an innovative opportunity. In addition,

policy makers may want to identify conditions that may override peoples' wish for independence or greater income: for example, if poor infrastructure creates difficulties in marketing and distributing products, or if incentives to continue working for large companies are more attractive than pursuing independence by starting a growth business. For practitioners, it is interesting to note that an innovative opportunity may lead one to pursue growth, and the competitive environment may make this easier or harder.

There are several limitations that can provide opportunities for follow on research. First, our sample comes from Korea. To generalize beyond this one country, these hypotheses could be tested on data from other countries. The GEM surveys, in fact, have been conducted in over sixty countries for more than ten years, which provides an opportunity for greater generalizability as well as cross-country comparisons. Second, perhaps there are other non-human resources that could impact one's aspirations, such as intellectual property or alliance relationships. In addition, we didn't study the impact of human or social capital and how these may compare or interact with the motivational variables this study emphasized. We hope this research contributes to continued efforts to build academic understanding about the drivers of growth and to help practitioners and policy makers determine how they can best promote this important phenomenon.

References

Amit, Raphael, MacCrimmon, Kenneth R., Zietsma, Charlene, and Oesc, John M. (2000). "Does Money Matter? Wealth Attainment as the Motive for Initiating Growth-Oriented Technology Ventures," *Journal of Business Venturing*, 16, 119-143.

Arenius, Pia, and Minniti, Maria. (2005). "Perceptual Variables and Nascent Entrepreneurship," *Small Business Economics*, 24, 233-247.

Arrow, Kenneth J. (1974). *The Limits of Organization*. New York: W.W. Norton and Company.

Baron, Robert A. (1998). "Cognitive Mechanisms in Entrepreneurship: Why and When Entrepreneurs Think Differently Than Other People," *Journal of Business Venturing*, 13, 275-294.

Baron, Robert A. (2002). "OB and Entrepreneurship: The Reciprocal Benefits of Closer Conceptual Links," *Research in Organizational Behavior*, 24, 225-269.

Baum, J. Robert, and Locke, Edwin A. (2004). "The Relationship of Entrepreneurial Traits, Skill, and Motivation to Subsequent Venture Growth," *Journal of Applied Psychology*, 89(4), 587-598.

Baum, J. Robert, Locke, Edwin A., and Smith, Ken G. (2001). "A Multidimensional Model of Venture Growth," *Academy of Management Journal*, 44(2), 292-303.

Baumol, William J. (1968). "Entrepreneurship in Economic Theory," *American Economic Review*, 58(2), 64-71.

- Betz, Frederick. (1993). *Strategic Technology Management*. New York: McGraw-Hill.
- Cassar, Gavin. (2007). "Money, Money, Money? A Longitudinal Investigation of Entrepreneur Career Reasons, Growth Preferences, and Achieved Growth," *Entrepreneurship and Regional Development*, 19, 89-107.
- Cliff, Jennifer. (1998). "Does One Size Fit All? Exploring the Relationship Between Attitudes Toward Growth, Gender, and Business Size," *Journal of Business Venturing*, 13, 523-542.
- Davidsson, Per. (1989). "Entrepreneurship—and After? A Study of Growth Willingness in Small Firms," *Journal of Business Venturing*, 4, 211-226.
- Davidsson, Per. (1991). "Continued Entrepreneurship: Ability, Need and Opportunity as Determinants of Small Firm Growth," *Journal of Business Venturing*, 6, 405-429.
- Davidsson, Per, Kirchhoff, Bruce, Abdunnasser, Hatemi-J, and Gustavsson, Helena. (2002). "Empirical Analysis of Business Growth Factors Using Swedish Data," *Journal of Small Business Management*, 40(4), 332-349.
- Drucker, Peter F. (1985). *Innovation and Entrepreneurship*. New York: Harper and Row.
- Gatewood, Elizabeth. (1993). "The Expectancies in Public Sector Venture Assistance," *Entrepreneurship: Theory and Practice*, 17(2), 91-95.
- Gobeli, David, and Brown, Daniel. (1987). "Analyzing Product Innovations," *Research Management*, 30(4), 25-31.
- Gundry, Lisa K., and Welsch, Harold P. (2001). "The Ambitious Entrepreneur: High Growth Strategies of Women-Owned Enterprises," *Journal of Business Venturing*, 16, 453-470.
- Hage, Jerald. (1980). *Theories of Organizations*. New York: John Wiley and Sons.
- Hansen, G.S., and Hill, C. W. (1991). "Are Institutional Investors Myopic? A Time-Series Study of Four Technology-Driven Industries," *Strategic Management Journal*, 12, 1-16.
- Hessels, Jolanda, van Gelderen, Marco, and Thurik, Roy. (2008). "Entrepreneurial Aspirations, Motivations, and Their Drivers," *Small Business Economics*, 31, 323-339.
- Katzell, Raymond, and Thompson, Donna E. (1990). "An Integrative Model of Work Attitudes, Motivation, and Performance," *Human Performance*, 3(2), 63-85.
- Kim, Chan, and Mauborgne, Renee. (2005). "Blue Ocean Strategy: From Theory to Practice," *California Management Review*, 47(3), 105-121.
- Kirchhoff, Bruce A. (1994). *Entrepreneurship and Dynamic Capitalism*. Praeger: Westport, CT.

Kirzner, Isreal M. (1973). *Competition and Entrepreneurship*. Chicago: University of Chicago Press.

Kirzner, Isreal M. (1985). *Discovery and the Capitalist Process*. Chicago: University of Chicago Press.

Knight, Frank H. (1964). *Risk, Uncertainty, and Profit*. New York: Sentry Press.

Kolvereid, Lars. (1992). "Growth Aspirations Among Norwegian Entrepreneurs," *Journal of Business Venturing*, 7, 209-222.

Kor, Yasemin Y., Mahoney, Joseph T., and Michael, Steven C. (2007). "Resources, Capabilities and Entrepreneurial Perceptions," *Journal of Management Studies*, 44(7), 1187-1212.

Kozmetsky, George. (1993). The Growth and Internationalization of Creative and Innovative Management. In R. L. Kuhn, *Generating Creativity and Innovation in Large Bureaucracies*. Westport, CT: Quorum Books.

Locke, Edwin A., and Latham, Gary P. (1990). "Work Motivation and Satisfaction: Light at the End of the Tunnel," *Psychological Science*, 1(4), 240-246.

Manalova, Tatiana S., Carter, Nancy M., Manev, Ivan M., and Gyoshev, Bojidar S. (2007). "The Differential Effect of Men and Women Entrepreneurs' Human Capital and Networking on Growth Expectancies in Bugaria," *Entrepreneurship: Theory and Practice*, 31(3), 407-426.

Martin, Michael J. C. (1984). *Managing Technological Innovation and Entrepreneurship*. Reston, VA: Reston Publishing Company, Inc.

Pfeffer, Jeffrey, and Salancik, Gerald R. (1978). *The External Control of Organizations*. New York: Harper and Row.

Reynolds, P., Bosma, N., Autio, E. Hunt, S., De Bono, N. Servais, I., Lopez-Garcia, P., and Chin, Nancy. (2005). "Global Entrepreneurship Monitor: Data Collection Design and Implementation 1998-2003," *Small Business Economics*, 24; 205-231.

Roberts, Edward, and Berry, Charles. (1985). "Entering New Businesses: Selecting Strategies for Success," *Sloan Management Review*, 26(3), 3-17.

Robertson, Thomas S. (1967). "The Process of Innovation and the Diffusion of Innovation," *Journal of Marketing*, 31(1), 14-19.

Rumelt, Richard. (1987). Theory, Strategy, and Entrepreneurship. In D. Teece, *The Competitive Challenge*. Cambridge, MA: Ballinger.

Scherer, F. M. (1980). *Industrial Market Structure and Economic Performance*, 2nd Ed. Chicago, IL; Rand McNally College Publishing Company.

Schon, Donald A. (1963). Champions for Radical New Inventions, *Harvard Business Review*, 41(2), 77-86.

Schott, T. and T. Bager, 2004, "Growth Expectations by Entrepreneurs in Nascent Firms, Baby Businesses and Mature Firms," in M. Hancock and T. Bager (eds.), *Global Entrepreneurship Monitor Denmark 2003*, Denmark: Borsens Forlag.

Schumpeter, Joseph A. (1961). *The Theory of Economic Development*. New York: Oxford University Press.

Shane, Scott, Locke, Edwin A., and Collins, Christopher J. (2003). "Entrepreneurial Motivation," *Human Resource Management Review*, 13, 257-279.

Tominc, Polona, and Rebernik, Miroslav. (2007). " ," *Small Business Economics*, 28(2/3), 239-255.

Tushman, Michael L., and Nadler, David. (1986). "Organizing for Innovation," *California Management Review*, 28(3), 74-92.

Vroom, V.H. (1964). *Work and Motivation*. New York: Wiley.

Wiklund, Johan, and Shepherd, Dean. (2003). "Aspiring for, and Achieving Growth: The Moderating Role of Resources and Opportunities," *Journal of Management Studies*, 40(8), 1919-1941.

Wiklund, Johan, Davidsson, Per, and Delmar, Frederik. (2003). "What Do They Think and Feel About Growth? An Expectancy-Value Approach to Small Business Managers' Attitudes Toward Growth," *Entrepreneurship: Theory and Practice*, 27(3), 247-270.

Zahra, Shaker, Nash, Sarah, and Bickford, Deborah (1995). "Transforming Technological Pioneering into Competitive Advantage," *Academy of Management Executive*, 9(1), 17-31.

ⁱ Tozzi, John. The Entrepreneurship Myth. *Business Week Online*. 1/24/2008.

Entrepreneurial Aspirations vs. Academic Aspirations Among Bio Researchers - Finnish Perspective

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A new university act was enforced in 2005 formalizing the third mission of the universities in Finland. It advocates development of interactions between universities and the society, and shifts the role of universities towards the entrepreneurial university. The role of the Finnish universities has not until recently been important in terms of developing entrepreneurs; the graduates are underrepresented in the entrepreneurial population, and there is a negative correlation between education and entrepreneurship. In addition, it is assumed that universities will not be able to absorb the growing number of PhDs into an academic career but they will increasingly need to seek other career options, for instance entrepreneurship. This paper reports on career paths of bio-science researchers who participated in entrepreneurship training. Paper focuses on a small sample (N=6) of researcher interested in embarking both academic and entrepreneurial activities, and investigates how they combine entrepreneurship and academic aspirations. The study portrays challenges in combining academic and entrepreneurial activities in the Finnish university setting.

Track: 14. Other SME Related Issues

The Status of Entrepreneurship Education in Korea

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The number of start-up has been decreased since 2006 in Korea. Even though the increase of market demand of entrepreneurship education, supply is not sufficient due to the lack of fostering system in Korea. For this reason, Korean government has concerned about the entrepreneurship education fostering potential entrepreneur. The purpose of this article is to introduce entrepreneurship education of Korea focusing on 5 Graduate Schools of Entrepreneurship Education. We present general status, education program, scholarships, faculty, and survey results of them. And last, we do suggest political recommendations for government, entrepreneurship education institution including 5 Graduate Schools of Entrepreneurship.

Introduction

Small and medium business (SMB) is the engine for economic growth because it has played a role as the creators of jobs. In the concrete, SMB hired about 10 million peoples and large firm hired about one and half million peoples in 2006.¹ In other words, after currency crisis in 1997, SMB played a great role in inducing virtuous circle such as production, employment, and profit creation by yielding employment creation.

But the employability of SMB in 2006 reduced due to the uncertainty of economic situation. The employability of 2006 is the same as 95 percent of 2005. Especially, the number of start-up of the manufacturing industry, the foundation of our economy has been decreased since 2003. In concrete, the proportion of manufacturing industry's start-up was 23.6 percent of total number of start-up in 2003. In 2005 it was 17.9 percent and 14.7 percent in 2006. KBIZ report (October 2005) shows that the major reason of start-up decrease in manufacturing

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¹ Korea Federation of Small and Mmedium Business(KBIZ) News Letter (2008.October.13)

industry is low profitability of that industry. In the concrete, low profitability (45.3 percent), a manpower shortage (17.9 percent), excessive regulations (16.3 percent), and financial difficulty (15.5 percent) are the primarily factors of evasion of start-up in manufacturing industry. Report also presents that to overcome start-up decrease in manufacturing industry, funds increase (37.9 percent), tax cut (22.2 percent), deregulation and the support of live in incubating center (13.6 percent), and manpower support (10.5 percent) are requested. Kim et al. (2007) shows that start-up decrease in Korea is caused by emigration of domestic enterprise to the abroad, decrease of young person due to the aging society and low birth, and complicated start-up condition.

Recently, the necessity and interest of entrepreneurship education increase. These are due to the start-up decrease which is already mentioned, appearance of successful venture, increase of unemployment by restructuring, and the increase of young peoples' unemployment.

Even though the demand of entrepreneurship education increased, supply was not sufficient. We still have insufficient capacity (lack of skilled teaching staff, teaching materials, practitioners, and networking models for theory – practice or university – community cooperation). For this reason, SMBA established regular courses in 5 graduate schools aiming at fostering entrepreneur and entrepreneur consultant with systematic and professional knowledge.

There are so many researches have been done in the area of entrepreneurship education. For the purpose of this study, we define entrepreneurship education program as the process of providing individuals with the ability to recognize commercial opportunities and the knowledge, skills and attitudes to act on them (Jones and English, 2004).

Bryant(1996) suggested that recent technology development(IT), expansion of aggregate demand, growth of entrepreneurship and cyber space make would-be entrepreneurs to create own business more easily. This environment is highly related to the start of formal education systems. It's been more than 60 years since Myles Macc opened entrepreneurship class in U.S. In 1994, over 120,000 American students were taking entrepreneurship classes (Katz, 1994). The introduction of the entrepreneurship education enables researchers and educators to do research on entrepreneurship. Former research on the vital factors influencing the decision to start an own business is related to personal characteristics of individuals (Brockhaus, 1980; 1982; McClelland, 1961). More recently, focus of the research expands to environment of the individuals such as attitude and antecedents (Bird, 1988; Boyd & Vozikis, 1994; Shapero, 1975, Shapero & Sokol, 1982). In spite of the significance of general education for business creation, the direct effect of the entrepreneurship education on personal attitude is not fully investigated (Donckels, 1991; Krueger & Brazeal, 1994). Especially, university level entrepreneurship education has received general academic attentions (Gorman, Hanlon, & King, 1997; Young, 1997). At a same time, entrepreneurship education in primary and secondary schools should be reconsidered because it fosters the desire to participate in entrepreneurship education in college (Filion, 1994; Gasse, 1985).

Peterman and Kennedy (2003) investigate the impact of participation in Young Achievement Australia (YAA) entrepreneurship program in secondary school and conclude that participants tend to show higher perception of the desirability and feasibility for startups by using around 200 participants. Solomon et al. (2002) tested empirical analysis on entrepreneurship education and suggested that an important objective of entrepreneurship education is differentiation from typical business education because creation business is totally different activity than management (Gartner & Vesper, 1994). For the successful business entry, they emphasized skill building classes such as negotiation, leadership, product development and creative thinking.

Comparing to the diverse researches done by American researchers, in Korea, there have been little researches on entrepreneurship education so far because entrepreneurship education does not pay

attentions from social and economic field. Consequently, researches on secondary or college entrepreneurship generally focused on performance itself and its policy implications. The purpose of this article is to introduce entrepreneurship education of Korea focusing on 5 Graduate Schools of Entrepreneurship Education. We present general status, education program, scholarships, faculty, and survey results of them giving political recommendations for government, entrepreneurship education institution including 5 Graduate Schools of Entrepreneurship.

Methodology and Data Sampling

In the first stage, we do literature review, before we analyze the environment of Korea entrepreneurship educational programs and make analysis points. In the second stage, this paper presents overall entrepreneurship education programs in Korea. At the third stage of the research, 5 Graduate Schools of Entrepreneurship in Korea were used to identify the formal entrepreneurship educational programs.

Following is the list of 5 Graduate Schools of Entrepreneurship.

- Hoseo Graduate School of Global Business Entrepreneurship
- Chung-Ang Graduate School of Industrial & Entrepreneurial Management
- Graduate School of Venture Management of Jinju National University
- Graduate School of Entrepreneurship and Management of Cultural Business of Yewon Arts University and
- Graduate School of Entrepreneurial Management of Hanbat National University

The survey of the 5 Graduate Schools of Entrepreneurship including understanding level of education aims and providing services, quality of education service, and student's satisfaction measured Likert scale ranged from 1 to 5 (5 being the best) was conducted during the October 2007 in order to derive the development direction of entrepreneurship education of Korea.

The total of 198 students participated for this survey. The official graduate school's web pages, educational plans and programs brochures were checked for number of courses, pedagogy, teaching materials, governance structure, and quality and networking activities. The data were further complemented by the personal contact with the charging person at each graduate school and government employee of SMBA in order to judge whether entrepreneurship programs are funded more or not.

Entrepreneurship Education Program in Korea

Korea entrepreneurship education starts from SMB management courses since 1970s. After that it is developed in university and consulting firm since 1980s. In 1992, 28 universities opened courses as the name such as theory of SMB, start-up of SMB, management of SMB, and so on. As well as 10 private institutions also provided similar courses in early 1990s. Like this, our entrepreneurship education has been run as the way of regular course and irregular course. Regular course is defined as the course for acquiring degree of undergraduate or graduate school. On the contrary with this, irregular course is defined as the course offered from university not aiming degree or institution except university (Lee, 2000). Entrepreneurship education also can be categorized by students such as juvenile, university student, and public. Entrepreneurship education has been rapidly developed, especially regular course,

since later 1990s. One of them is 5 Graduate Schools of Entrepreneurship which is more specifically presented in next section. As well as, it is rapidly increased in the area of government project and private institution. Representative institutions are Small Business Center (SBC), Korea Productivity Center (KPC), economic newspaper, and university annex.

Program for juvenile

For juvenile, there are several representative programs such as BizCool, entrepreneurship tournament for industrial high school, and Teen Teen Economic Project (TEP).

BizCool is the representative juvenile program funded by SMBA as the recognition of importance of entrepreneurship education. BizCool is the compound word of “Business + School” which contains the meaning, learning the business from the school curriculum. BizCool is the juvenile program for industrial high school containing basic business education program such as understanding the firm and entrepreneur, entrepreneurship and management, and field trip. It is composed of basic and advanced courses. Basic course is divided as general and leadership course. Students can have a brush of basic business concept by the field trip through general course and entrepreneurship through leadership course. Advance course is composed of finding career path and managing mini company. Finding career path is the process to find future job by grasping the student’s talent and managing mini company is to acquire the knowledge of financing based on the understanding of economy and management.

Several offices of education of cities and provinces hold entrepreneurship tournament for industrial high school.

Non profit organization also provides entrepreneurship education. Seoul YMCA offers entrepreneurship education with employment education.

Seoul YMCA makes the juvenile have the entrepreneurship and be the good member of the community through its program. Additionally, it funds to the winner of ‘juvenile tournament of venture start-up’.

TEP is the consortium program of Chung-Ang newspaper, City Group, and occupation center of Seoul municipal. Unique aspect of TEP is that the donation of the profit to a social work organization is the part of the program. Finance expert helps the student manage fund.

Program for university student and public

As we mentioned above, the entrepreneurship education can be divided regular and irregular course. Regular course was started by the professor Chunyeop Park by teaching “start-up and analysis of business feasibility” in department of Industrial Engineering at Dong-Guk University in 1987. He also published ‘start-up of SMB and the analysis of business feasibility’, a theoretical background of curriculum of entrepreneurship education of Korea. Regular course has been developed by two stages. At first it was a part course of a Graduate School of Management and then it has been developed as the complex curriculum handling entrepreneurship and management of SMB in graduate school (or department). Most famous one is 5 graduate schools.

Currently, undergraduate schools provide 164 entrepreneurship courses and one fifth of them is funded by SMBA. These courses handle the subjects related with field which is not covered in Graduate School of Management and commonly provide the basic concepts related with entrepreneurship, outline of entrepreneurship process, key factors of entrepreneurship, guideline for business proposal, financing, technical analysis (market analysis, forecasting, and accounting analysis), and resource management. Special issue is opened as a type of seminar covering such as entrepreneurship policy,

venture capital, social responsibility of corporations, and government support system by adopting case study, discussion, and lecture of invited professional.

SMBA has been supported 5 Graduate Schools of Entrepreneurship since 2004 for a limited time. This will be discussed more detail on the later.

Irregular course is opened to complement of regular course as of the followings reasons (Lee, 2000).

- Insufficient faculty for entrepreneurship education in university
- Rigidity of the university system to open a new course and change curriculum
- Insufficient courses to cover the field

SMBA has run a center of irregular course since 1998. Most subjects are similar with regular course such as selection and comparison of entrepreneurship item, establishment of business proposal, process of business establishment (entrepreneurship process, relevant laws, regulations), success factors for venture firm, various government's support system for entrepreneurship, financing, and business process redesign such as marketing and supply chain (Lee, 2000). Irregular course is operated also by government, a local autonomous entity, university, association, and private consulting firm.

Entrepreneurship Education in Higher Education

In 2004, SMBA decided to support 5 Graduate Schools of Entrepreneurship, Hoseo Graduate School of Global Business Entrepreneurship, Chung-Ang Graduate School of Industrial & Entrepreneurial Management, Graduate School of Venture Management of Jinju National University, Graduate School of Entrepreneurship and Management of Cultural Business of Yewon Arts University, and Graduate School of Entrepreneurial Management of Hanbat National University for a limited time. 5 Graduate Schools of Entrepreneurship look to inspire entrepreneurship to the student and nurture the entrepreneur and entrepreneur consultant having knowledge for entrepreneurship and complex network. Candidate students should be potential entrepreneur, entrepreneur, and entrepreneurship consultant and expert of entrepreneurship education. All data which are mentioned from now on are based on October, 2007.

General Status of 5 Graduate Schools of Entrepreneurship

Table 1 shows the general status such as name, registration data, and academic program.

Table 1. General Status of 5 Graduate Schools of Entrepreneurship

University Name	Graduate School Name	Registration Date	Academic Program
Chung-Ang University	Graduate School of Industrial and Entrepreneurial Management	August, 2004	Information Management, Enterprise Management, Distribution Management, Art Management, Real Estate Management, Entrepreneurial Management, Entrepreneurial Consulting
Hoseo University	Graduate School of Global Business Start-up	April, 2004	Entrepreneurial Management, Entrepreneurial Consulting
Hanbat National University	Graduate School of Entrepreneurial Management	March, 2005	Techno Management, Account Information, Financial and Economic Engineering, Entrepreneur
Jinju National University	Graduate School of Venture Management	December, 2004	Business Administration, Enterprise Information Management, Advanced Child Welfare, English Information, Entrepreneur
Yewon Arts University	Graduate school of Entrepreneurship and Management of Cultural Business	December, 2005	Entrepreneurship and Management of Cultural Business, Entrepreneurship and Cultural Business

Difference with the Graduate Schools of Management

Table 2 shows the difference with the Graduate Schools of Management. Graduate Schools of Entrepreneurship has difference in the aspects of aim, candidate student program effectiveness with the Graduate Schools of Management.

Table 2. Graduate Schools of Management versus Graduate Schools of Entrepreneurship

Aspect of Difference	Graduate Schools of Management	Graduate Schools of Entrepreneurship
Aim	Nurturing Manager for Enterprise of Large or Middle Standing	Nurturing Entrepreneur
Candidate Student	University Graduate, Employee of Enterprise of Large or Middle Standing	Potential Entrepreneur, Entrepreneur, Entrepreneurship Consultant, Expert of Entrepreneurship Education
Program Focusing	Relatively Theory	Relatively Practice
Effectiveness	Short Employment by Enterprise of Large or Middle Standing	Self Employment with Entrepreneurship Employment Creation

Education Program

Table 3 shows the education program. Every school has its unique education program such as rocket pitch in Jinju National University. Rocket pitch is presentation of entrepreneur that makes the investor fund to business for 3 minutes.

Table 3. Education Program of 5 Graduate Schools of Entrepreneurship

Program	Chung-Ang University	Hoseo University	Hanbat National University	Jinju National University	Yewon Arts University
Regular Course	○	○	○	○	○
Irregular Course	○	○	○	○	○
Coaching	○	○	○		○
Internship	○	○		○	○
Field Trip	○	○	○	○	○
Study Domestic	○	○	○	○	○
Study Abroad	○	○	○	○	○
Competence Reinforcement /Crash Course		○			○
Graduation Thesis /Business Proposal	○	○	○	○	○
Poster Presentation					
Entrepreneurship Tournament	○	○		○	○
Rocket Pitch				○	

Table 4. Supporting Scholarship of 5 Graduate Schools of Entrepreneurship

University Name	Classification	Support Ratio	Number of Beneficiary /Total Number of Students
Chung-Ang University	Entering Student	50 Percent	16/16
	Enrolment Student	55 Percent ~ 30 Percent	25/34
Hoseo University	Entering Student	55 Percent ~ 100 Percent	
	Enrolment Student		
Hanbat National University	Entering Student	100 Percent	30/30
	Enrolment Student	80 Percent	22/28
Jinju National University	Entering Student	Establishment Fee	59/59
	Enrolment Student	Tuition Fee	
Yewon Arts University	Entering Student	70 Percent	30/30

	Enrolment Student	80 Percent	60/60
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Scholarship and Faculty

Table 4 shows the details of scholarship. Supporting scholarship is greatly dependent on Graduate Schools. It looks that national university student has more opportunity than that of private university. But this is originally due to the difference of tuition fees between national university and private university. And the number of faculty only for entrepreneurship education is still insufficient. Most faculties have concurrent position.

Survey Results

Survey is composed of 4 parts; demographic questionnaires, understanding level of education aims and providing services, quality of education service, and student's satisfaction. Generally, national university gives better results than private university.

By the analysis of demographic part, we can see that 74 percent of the respondents are man. This implies man is more interested in Graduate Schools of Entrepreneurship. Age of between 36 and 45 is majority. Only 3.7 percent of them are full time student which means Graduate Schools of Entrepreneurship plays an important role in society by jumping up the competence of employees.

To analyze understanding level of education aims and providing services, 11 questionnaires are asked. Analysis results show that most students have a good grasp of education aims and providing services. For the questionnaire of the understanding of principles and the aim of establishment, 83 percent of the respondents answer as '4' or '5'. Conformity of object between entrance of student and Graduate Schools of Entrepreneurship shows that respondents of 97 percent of Hanbat National University answers as '4' or '5'. On the contrary with this, for the understanding of industry-science relationship program and job career center, 40 percent of the respondents answer as less than '3'. This implies that the needs of improvement of recognition industry-science relationship program and job career center are required. Result also shows that student has profound interest about study abroad. For the scholarship, national university gets better result than private university.

Analysis for the quality of education service, 30 questionnaires are asked. In this paper, we show several representative questionnaires such as quality of curriculum and faculty, and quality of facilities. Overall results show student thinks that the quality of education service is high. For the quality of curriculum and faculty, 77 percent of the respondents answer as '4' or '5'. But the result of quality of facilities is poor.

Analysis for the student's satisfaction, 38 questionnaires are asked. Like what we did in the quality of education service, we show the results of several representative questionnaires such as pedagogy, practicalness, supporting scholarship, administration service, and offering information about job opening.

For the pedagogy, students seems to generally satisfy except 2 ~ 3 percent of the respondents answer as '2'. For the practicalness and supporting scholarship, national university gets the better result than private university. Also students seem to satisfy administration service. But the students do not satisfy with the quality of offering information about job opening.

Findings and Recommendations

In spite of the short period of supports, 5 Graduate Schools of Entrepreneurship achieve great outcomes in terms of quantity and quality. Construction of entrepreneurship infra, qualitative growth of entrepreneurship market, creation of employment, academic establishment of entrepreneurship education, advancement of entrepreneurship education, and network with other university and local autonomous entity are the representative qualitative outputs.

In spite of these qualitative outputs, Graduate Schools of Entrepreneurship have several problems.

- Insufficient recognition concerning 5 Graduate Schools of Entrepreneurship and entrepreneurship education in our society and the limited environment of entrepreneurship education
- Not being systematic such as the absence of institution of entrepreneurship education for kids, loose network between organization, insufficient entrepreneurship courses, courses without considering the student's level, especially the absence of long term plan for the entrepreneurship education

To overcome these problems, we suggest the recommendation for government, entrepreneurship education institution, and 5 Graduate Schools of Entrepreneurship.

Recommendations for Government

There are 3 major recommendations for government; making policy framework for the entrepreneurship education, establishing support plan for entrepreneurship education institution, and making training system for faculty

- Policy framework for the entrepreneurship education includes such as planning lifelong education program, securing the fund, operating through the organization who take full charge of entrepreneurship education and play a role as think-tank, and making systematic network infra
- Supporting plan for entrepreneurship education institution includes making cooperative system between institution for lifelong education program, making sharing system of lesson's learned and best practice, suggesting guideline when develop course and make teaching material
- Making training program for current faculty and potential faculty

Recommendations for Entrepreneurship Education Institution

There are 3 major recommendations for entrepreneurship education institution; making unique program that confirms the institution, improving program quality, and making long and short term target and output measurement index

- To make unique program that confirms the institution, every institution has to decide what they are targeting at first. Also, establishing managerial regulations to handle unique program
- Using output measurement index, every institution can control its own long and short term

target

- To improve the quality of the education program, the course should be close with the field and the quality control for the lecturer is also required.

Recommendations for 5 Graduate Schools of Entrepreneurship

There are 3 major recommendations for 5 Graduate Schools of Entrepreneurship; diversifying the program, making support system for students to get a job or entrepreneurship, and making strong circle between 5 Graduate Schools of Entrepreneurship

- To make diversification of the program, benchmarking will be helpful. And various pedagogies will be needed.
- To help students get a job or entrepreneurship, improving recognition through public relations is important.
- 5 Graduate Schools of Entrepreneurship have same object. This object can be easily reached if the schools tied strongly.

References

Allan, David, and Oswald, J. (2008). "Entrepreneurial Ventures in Higher Education: Analyzing Organizational Growth," *International Small Business Journal*, 26(6), 683-708.

Bird, B. (1988). "Implementing entrepreneurial ideas: The case for intention," *Academy of management review*, 13(3), 442-453.

Brockhaus, R. H. (1980). "Risk-taking propensity of entrepreneurs," *Academy of management journal*, 23(3) 509-520.

Brockhaus, R.H (1982). "The psychology of the entrepreneur," In *encyclopedia of entrepreneurship*. Ed. C. Kent, D. Sexton, & K. Vesper. Englewood Cliffs, NJ: Prentice Hall, 39-56.

Bryant, Hattie, (1996). *Small business today guide to beating the odds*, Rocklin, CA: Prima publishing.

Donckles, R. (1994). "Education and entrepreneurship experiences from secondary and university education in Belgium," *Journal of small business and entrepreneurship*, 9(1), 35-42.

Filion, L.J. (1994). "Ten steps to entrepreneurial teaching," *Journal of small business and entrepreneurship*. 11(3), 68-78.

Gartner, W. B. & K. H. Vesper (1994). "Experiments in entrepreneurship education: Success and failures," *Journal of business venturing*, 9, 179-187.

Gasse, Y. (1985). "A strategy for the promotion and identification of potential at the secondary school level," Paper presented at the Frontiers of entrepreneurship research, Babson College,

Wellesley, MA.

Gorman, G., Hanlon, D., & King, W. (1997). "Some research perspectives on entrepreneurial education, enterprise education and education for of small business management: A ten year review," *International small business journal*, 15(3), 56-77.

Kim, J. (2007). *A Study on the Entrepreneurship Education*. Seoul: KOSBI

Krueger, N.F & Brazeal, D.V. (1994). "Entrepreneurial potential and potential entrepreneurs," *Entrepreneurship: Theory and practice*, 18(3), 91-104.

Lee, S. (2000). "A study on the venture's entrepreneurship education of home and abroad," *Industrial Economy*, 15, 49-91.

McClelland D.C (1961). *The achieving society*. New York: Van Nostrand.

Shapiro, A. (1975). "The displaced, uncomfortable entrepreneur," *Psychology today*, November 9, 83-88.

Shapiro, A. & Sokol, L. (1982). "The social dimensions of entrepreneurship," In *Encyclopedia of entrepreneurship*. Ed. C.A. Kent, D. L. Sexton, & K. H. Vesper. Englewood Cliffs, NJ: Prentice Hall, 72-90.

Solomon, G. T., S. Duffy, & A. Tarabishy (2002). "The state of entrepreneurship education in the United States: A nationwide survey and analysis," *International journal of entrepreneurship education*, 1(1), 65-86.

Young, J. E. (1997). "Entrepreneurship education and learning for university students and practicing entrepreneurs," In *Entrepreneurship 2000*. Ed. D.L. Sexton & R.W. Smilor. Chicago, Illinois: Upstart publishing company, 215-242.

Design, Implementation and Evaluation of an E-learning Course “Globalization”

Christopher Stehr

Globalization processes oblige new competencies from teachers, learners and staff of internationalized organizations and corporations. This requires changes of the personal curriculum vitae. In consideration of these individual and institutional challenges a “globalization e-learning course” (GELC) could help developing needed “globalization competencies”.

A GELC should provide a neutral view on this issue. The participant should be able to judge the processes of globalization on his own at the end of the course via learned “globalization competencies”.

The content of globalization is too complex to comprehend it through a typical e-Learning course. New methods of teaching and course design are described in the following paper. The new methods and designs enable a special tutoring system to implement the content of globalization. These developments are based on a concrete example of an established and evaluated e-Learning course.

Keywords: globalization, e-Learning, blended-learning, intercultural competence.

Scientific Interest

Whether as “globalization” the English speaking regions or as “mondialisation” in Francophone countries, “globalization” is currently a widely debated topic. Therefore, what would be more appropriate as an e-Learning course concerning globalization? The worldwide web (WWW) as well as the multimedia-based and software-specific components (e.g. worldwide almost uniformly applied system software) of such an e-Learning course are part of technical globalization.

Course e-Learning courses relating to the subject “globalization” constitute a particular challenge. Problems of successful knowledge transfer are a significant factor (Hui et al. 2005; Gao et al. 2006, Simon et al. 2008). Globalization is a complex and comprehensive topic and different opinions in the scientific community make it impossible to teach the only accurate theory (Teusch, 2004). For this reason the major learning target has to aim a non-judgemental access to the topic. The participant of such an e-Learning course has to learn how to estimate the benefits and detriments of globalization processes by himself (Sun et al. 2004).

To achieve these targets, the major question is how to design and tutor an e-Learning course concerning globalization? It is the pivotal question in the following article. Analysis and Conclusions are based on an e-Learning course developed for a supra-regional educational institution. Since 2006, the course has been conducted several times and with changing target groups (citizens, pupils, students, trainers). Evaluations with the developer team and the tutor team are combined into the final elaboration.

Globalization as Content

The Subjectiveness of perceiving globalization

“Globalization” is a complex topic and effects an emotional connotation to participants of the discussed e-Learning course. At first, the content of learning can hardly be categorized and covered completely. In addition, each perception of globalization processes is individual and subjective. Depending on the individual attitude towards “globalization” participants deal differently with the presented content. A personal categorization into winners and losers of globalization depends on the personal point of view and the individual impacts related to the context specific social environment (Debiel et al. 2006).

The central problem is therefore: In public discussion and on a personal level “globalization” stands for a concept of enemy. In this case, globalization is made responsible for unemployment, the closing of headquarters, climate change etc. For e-Learning participants this means a necessary examination with contents which may evoke existential fears as well as feelings of helplessness and powerlessness.

Definition of terms: Globalization

“Today, ‘Globalization’ as a political keyword is on the tip of everyone’s tongue.” (Ritter and Zeitler, 2000) “What is globalization?”, Ulrich Beck asks in the title of his book, which has since become a classic. Ulrich Beck replies as follows: “Globalization means (...) the processes, in whose succession nation states and their sovereignty are influenced and related crosswise by transnational actors, their market opportunities, orientations, identities and networks.” (Beck, 1997) Besides further actors and the dynamic network structures, it is also important to define the different levels of globalization: “Globalization is the continuous interlinking process of different worldwide happening occurrences in the fields of economy, technology, politics, culture and social aspects of nations with mutual interdependencies and consequences.” (Stehr, 2003) Moreover, Teusch’s advanced definition addresses the perception on the meta-level. “Globalization is a multi-dimensional, multi-causal, to a large extent self-propelled, dialectic and with reference to its impacts ambivalent process that disposes of a far back reaching historical genesis, but only recently has embraced a new quality”. (Teusch, 2004) There may be strong dissent in the globalization debate but most definitions agree on the dissolution of closed, delimitable areas and nation states (denationalization). (Varwick, 2002).

Actors, transfrontier processes and dynamic-complex dimensions of globalization take centre-stage in these definitions.

Actors of Globalization

Within the processes of globalization powerful actors and supra-national organisations (for example the European Central Bank), multi-national enterprises and non-governmental organisations (for example the globalization critical movement Attac) or even individuals occur. These actors have emerged as global players. They influence the complete system and the nation states.

There are different opinions concerning whether the globalization phenomenon and the influence of these actors are per se positive or negative. Meanwhile, there are empirical analyses for both perceptions, which demonstrate the positive or negative aspects of globalization and the respective actors. (Debiel et al, 2006).

If the participant of the e-learning course himself estimates globalization per se as a positive or negative process depends on two factors. Major factors are perceptions of self-awareness and human self-reflection: “Do processes of globalization affect my life and how much am I involved in processes of globalization?” Also the personal influence is of central interest referring to the question: “To what extent am I able to influence globalization processes by myself?” With these questions a change of perception takes place. In this process the individual is leaving the reactive position to the point of a proactive attitude towards globalization processes.

Dimensions of Globalization

Besides the actors described there are additional qualitative and quantitative dimensions of globalization. Often, the term “globalization” is reduced to economics. (Welge and Holtbrügge, 2001; Bhagwati 2004).

In the meanwhile, *technical, ecological, political, cultural* and *social globalization* are additionally mentioned. (Teusch, 2004). All the named dimensions are interdependent. Developments, for example within the political dimension (global trade agreements, e.g. to lower duties) support the exchange processes on the economic level. As a result, increasingly more actors such as so-called emerging markets participate in this world economy (worldwide competition). Concurrently, new technical developments in transportation and communication support the further interaction and involvement of the participating actors (states, regions, cities, enterprises, individuals). In this way, they contribute to a *dynamic expansion, higher intensity and speed* of globalization processes. The experience of chances and risks is the result of the participating human being in this life of “locational polygamy” and in “actual time” (Beck, 1997). The mass media enforces the impression of simultaneity and nearness (synchronicity of events) and enforce the process of this “time-space-compression” (Harvey, 1990).

These exchange processes have also reached the cultural dimension. The former relevant differentiation between local, national and international level as the necessary human social frame of reference is widened to include the term “global” (world society).

Conception, Implementation and Evaluation

Selection of e-Learning Platform

The selection of the e-Learning platform and its structure has a significant impact on the manner and progress of the future execution of the course. E-Learning platforms are programmed to be goal-orientated in order to facilitate the learning process. Accordingly an implicit model of the learning process forms the basis for the platform with influence on structure, content of learning and their implementation into the course (Simon et al. 2008). There

are numerous commercial, and some non-commercial, systems which are continuously being enhanced (Baumgartner et al. 2002).

The most important criteria to select an appropriate platform are system compatibility, author's tools, usability and costs (Baumgartner, et. al., 2002, Simon et al. 2008). As a result, the open source e-Learning platform Moodle was decided to be the most appropriate e-Learning platform for this course.

Structure and Teaching Design

Both, the central *actors* and the above mentioned "*meta-processes*" with regard to location and time as well as the *dimensions* (economy, technology, ecology, politics, culture, society) have to be presented in an e-Learning course about globalization. To imbed the topic of globalization the content must be covered and categorized systematically. The analysis of globalization dimensions and the learning target developed demonstrate the need for a modular structure of the content of the course. It is appropriate to develop one single module lasting one week for each described dimension. The course now contains six modules plus one module "historical dimension" and one additional module "globalization is designable".

Basic knowledge is essential for understanding the subsequent learning steps. Therefore, the e-Learning course provides a minimum learning profile. Necessary basic knowledge can be acquired by processing a summarized print version (about 100 pages). The contents as well as their weighting and selection were developed by a globalization expert team consisting of up to ten persons.

Auxiliary sources, multimedia based preparation and more detailed contents are provided. These additional propositions enable an intensification of the learning content beyond the minimum learning profile and a methodical diversion in addition to textual and graphical knowledge transfer (Sun et al. 2003).

Furthermore, an intensification of the learning content is enabled by an integrated discussion board. This discussion board is supervised by the tutor, who provides daily and weekly exercises and one major exercise which is to be solved until the end of the course.

The discussion board is not only to answer emerging questions by the tutor, but also to animate the participants to argue their personal opinions and to discuss the matter beyond the given facts and information offered in each module. By comparing their opinions and arguments, the participants are able to develop their own differentiated attitudes to the matter of globalization.

Different methods of teaching are used in this discussion board for knowledge transfer as well as an advanced element of study and variety of the learning content. (Müller, 2003). The Concept of teaching and mentoring includes the integration of current globalization articles (e.g. current developments in the United Nations Security Council or in the International Monetary Fund) and individual feedback for a varied assignment of tasks based on examples. These methods can be adapted to the rate of the learning progress.

According to expectations, issues requested by the participants are also covered in the discussion board. This means an extensive increased effort of mentoring and decreases the applicability of prepared modules. Nevertheless it is deemed as essential to achieve the learning target.

Evaluation of the course

The following results are based on different evaluations within four completed Courses (two of them with face-to-face sessions) with about 100 participants. Activities of all learners in the learning area and the discussion board are recorded automatically by the platform Moodle with the function of user tracing. Within four weeks of course, the most active participants achieve around 1100 Views (Page views in the learning area in the e-Learning course) and an average participant approximately 400-500 Views. Around 2/3 of the learners participate regularly in the discussion board, depending on the activity with 5-10 posts per week.

The results of all evaluations have a high contentedness with the tutorial mentoring. The prompt and competent editing of organizational and content related enquiries was particularly emphasized, as were personal feedbacks and praise from the tutor and additional information provided by the tutor. For example discussions based on questions such as “How much globalization can a person tolerate?” (Safranski, 2003).

Participants who took actively part in the discussion board declared higher satisfaction and subjectively better learning progress. A random analysis in posts from learners showed how they had integrated the learning content into their own opinions and argumentation and therefore changed their way to thought about globalization. These persons admittedly invested much more time for exercises and learning content (6 hours or more) than the suggested 3 or 4 hours.

The daily and weekly exercises were executed by the participants with different intenseness. A decreasing participation and lower intenseness was noticed to the end of the course as well as the first day after weekends and holidays.

Discussions within the daily exercises could also be continued for a couple of days. The most intensively discussed themes were ones, which had the most direct connection to the participants' everyday life, e.g. climate change and food. To support the transfer of knowledge, it is reasonable to orientate on everyday reality of the participants (Kraus, 2004).

The multimedia offers and the expertise provided were seen as very comprehensive, attractive and varied. The course fulfilled partly even exceeded the participants' expectations.

All participants evaluated the variety and topicality of the subjects treated and their qualitative presentation very positively. In opinion of the learners the up-to-date content of learning (e. g. nuclear crisis in North Korea/Political Form of Globalization) contributed a great deal to accomplishing learning targets. A high amount of participants declared they had learned above the expected average.

The best results were recognized in courses with blended learning. Face-to-face sessions at the beginning of a course increased the motivation of participants and substantially supported their learning progress and satisfaction.

Lessons

The following recognized results are reduced to the most important points for the content of learning and structure as well as to the progress of course. These results have a significant influence on structure of teaching and learning methods in e-Learning courses with globalization as main topic.

First, Globalization is a complex and comprehensive issue. An entire presentation and teaching of all relevant points is not possible. Because of this complexity, some important issues or relevant persons (actors of globalization) can easily be forgotten in a course. This is the reason why a focus on major points of learning targets and learning contents is absolutely necessary. In addition an orientation on the expectations of the participants is important to concentrate the content of learning on major points.

Second, It is indispensable to present the complexity, advantages and disadvantages as well as the risks and opportunities of globalization. In addition the presentation of positions from proponents and opponents of globalization and the empirical evidence for their point of view is necessary.

Third, As consequence after reduction of content and focusing on major point a modular structure is unavoidable. The six main modules are designed in connection to the named actors and dimensions of globalization. In addition, the historical dimension of globalization (module No. 7) and a module about concrete personal opportunities to design and involve globalization processes (module No. 8) and a module for introduction into the Moodle platform (module No. 9) can be added. Further modules are possible by this stringent basic structure.

Fourth, The target of teaching and learning is to enable a neutral introduction and overview to the issue of globalization. Another important target is to facilitate learning of information search skills and media use for individual research (media literacy). The training of these competencies can be embedded methodically into the course.

Fifth, Not just facts and information but also one's personal position is an important factor for evaluation of globalization processes. Learners have to be encouraged to assess globalization processes by themselves and to find their own position by a self critical process. The participants need to recognize and interpret globalization from different points of view (major learning target). In order to enable this process it is necessary to provide appropriate learning methods, e.g. methods of role play or exercises with change in perspective.

Sixth, Learning targets for the present e-Learning course were defined, but these aims are not of universal meaning. The learning targets have to be modified for each new course according to demands and interests of participants. Target competencies for media and information use and skills of judgment have to be considered for modification.

Seventh, The thematical and didactical qualification of the tutor is the major factor of success. The tutors must have a well-grounded knowledge about globalization. Acquaintance with standard and secondary literature (approx. 30 – 50 relevant reference books) is also a basic requirement as well as willingness for constant further training and knowledge about current affairs and processes with global impact. An unprejudiced presentation of knowledge and information by the tutor is fundamentally in this context.

The major criteria to a successful accomplished globalization e-Learning course are participants' acceptance for methods of e-Learning and usability of the platform Moodle. Moreover, high intrinsic and extrinsic motivation of the participants was decisive, as well as a high degree of commitment by the tutors. Absence in these points can be recognized early and make successful accomplishment of the course impossible.

In accordance to these factors four major criteria has to be clarified at the start of such a course. These points are the motivation of the participant and the didactical qualify of the tutors, the expected input in terms of support and the execution of face-to-face sessions.

References

- Altvater, E. and Mahnkopf, B. (2002). *Grenzen der Globalisierung*. Westfälisches Dampfboot: Münster.
- Bhagwati, J. (2004). *In Defense of Globalization*. Oxford University Press Inc.: Oxford.
- Baumgartner, P., Häfele, H. and Maier-Häfele, K. (2002). *E-Learning Praxishandbuch, Auswahl von Lernplattformen, Marktübersicht - Funktionen – Fachbegriffe*. StudienVerlag: Innsbruck/München.
- Beck, U. (1997). *Was ist Globalisierung?*. Suhrkamp: Frankfurt am Main.
- Debiel, T., Messner, D. and Nuscheler, F. (2006). „Globale Trends 2007“, in *Information und Lernen mit Multimedia und Internet*. Ed. Issing, L. J. & Klimsa, P. Beltz. BVU: Weinheim.
- Forrester, V. (1997). *Der Terror der Ökonomie*, Goldmann: Wien.
- Gao, S., Tong, Y., & Rusu, L (2006). *Development of E-society in China*.
- Lehmann, B. & Bloh, E. (2002). *Online-Pädagogik*, Schneider Verlag: Hohengehren.
- Häfele H and Maier-Häfele K. (2004). *101 e-learning Seminarmethoden*. managerSeminare Verlag GmbH: Bonn.
- Harvey, D. (1990). *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*: Blackwell: Cambridge.
- Hui D., Guangzhi W., Bo H., Yiyi Z., Zhi Y., Meng M and Shangkai G (2005) *Construction of a knowledge center for medical image processing*.
- Kahiigi, E.K., Ekenberg L., Hansson H, Tusubira F.F. and Danielson M. (2008). “Exploring the e-Learning State of Art”, in *The Electronic Journal of e-Learning*, 6 (2), 77 – 88.
- Lehmann, B. (2002). “Konzeption von und Erfahrung mit netzbasiertem Lehren und Lernen“, in *Online-Pädagogik*. Ed. Lehmann B. & Bloh E.. Schneider Verlag: Hohengehren.
- Issing, L. J. and Klimsa, P. (2002). *Information und Lernen mit Multimedia und Internet. Lehrbuch für Studium und Praxis*. Beltz BVU: Weinheim.
- Martin, H.-P. and Schumann, H. (1998). *Die Globalisierungsfalle. Der Angriff auf Demokratie und Wohlstand*. Rowohlt Tb: Hamburg.
- Kandzia, P.-T. and Ottmann, T. (2003). *E-Learning für die Hochschule. Erfolgreiche Ansätze für ein flexibles Studium*. Waxmann: Münster.
- Reß, L. (2003). *Live-Online-Lehren. Methoden und Übungen für das virtuelle Seminar*. Daten + Dokumentation GmbH: Friedberg.
- Rinn, U. and Meister, D. M. (2004). *Didaktik und neue Medien. Konzepte und Anwendungen in der Hochschule*. Waxmann: Münster.
- Ritter, M. & Zeitler, K. (2000). *Armut durch Globalisierung – Reichtum durch Regionalisierung*. Stocker: Graz.
- Safranski, R. (2003). *Wieviel Globalisierung verträgt der Mensch*. Hansa: München.

- Simon B., Treiblmaier H., Neumann G. (2008). „Elektronische Lernumgebungen in Bildungseinrichtungen: Eine Diskussion kritischer Erfolgsfaktoren“, in *Zeitschrift für Betriebswirtschaft*, 7/8, Wiesbaden.
- Stehr, C. (2005). *Brasilien und Globalisierung – Handlungsspielräume aktueller brasilianischer Wirtschaftspolitik*. polymundo-Verlag: Ulm.
- Stehr, C. (2003). *Globalisierung und Destabilisierungstendenzen innerhalb des Internationalen Systems. Eine Indikatorenanalyse für ausgewählte Nationalstaaten*. Dissertation Freie Universität Berlin: Berlin.
- Sun, L., Lubega, J.T and Williams, S.A. (2004). “Design for a Learner-Oriented Tracking”, in *Lecture Notes in Computer Science*, 3143, 155.
- Sun, L., Williams, S. A., Ousmanou, K., and Lubega, J.T. (2003). *Building Personalised Functions into Dynamic Content Packaging to Support Individual Learners*.
- Teusch, U. (2004). *Was ist Globalisierung? Ein Überblick*. Primus Verlag: Darmstadt.
- Woyke, W. (2002). *Handwörterbuch Internationale Politik*. UTB: Bonn.
- Hesse, F. W. and Friedrich, H. F. (2003). *Partizipation und Interaktion im virtuellen Seminar*. Waxmann: Münster.
- Welge, M. K. & Holtbrügge, D. (2001). *Internationales Management*. Schäffer-Poeschel: Landsberg/Lech.
- Zürn, M. (1998). *Regieren jenseits des Nationalstaats*. Suhrkamp: Frankfurt a.M.

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General Framework for Public Education of Entrepreneurs

by Jan Laubscher

Today's society seems to be marked by increasing poverty and an apparently unequal allocation of opportunities. – While the first point is undoubtedly a fact, the second one is not necessarily true. Common problems concerning opportunities are a lack of perception and the belief in being able to pursue them.

One way to engage these problems is educating people in entrepreneurship.

To be an entrepreneur does not necessarily mean to become a reckless business man. It means instead to be fulfilled with the fundamental volition to satisfy the needs of others and, in doing so, to ensure one's own financial liberty.

Therefore, entrepreneurs possess the will and ability to innovate given patterns, the awareness for risk combined with the readiness to bear it, the sense for the future development of people's needs, and of course a good pinch of entrepreneurial spirit. Fields of deployment can be found everywhere within our society.

Introduction

All over the world, leaders and academics are talking about the importance of entrepreneurship and having entrepreneurs in our society. They state that the economic and cultural soil has to be prepared for entrepreneurs, that we have to cultivate and foster them. (Richtermeyer, et al., 2005)

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But:

What is an entrepreneur?

And:

What is so special about her or him?

And even more important:

Why should we spend money to educate and train such individuals?

This paper will provide answers to these questions and illustrate ways to achieve the goal to foster entrepreneurship.

The Entrepreneur – Who or What Is That?

Historically, the term entrepreneur goes back to the 16th century. It is first used in France for an adventurer that hires mercenaries and offers his services for a wide variety of aims (Fallgatter, 2002). Later it is also used for men of action that conclude contracts for official tasks, implement new agricultural techniques, invest their own money in new industries and also for leaders of military expeditions (Malek, et al., 2004).

Cantillon (1931) is the first one who uses the term to describe a specific sort of economic participant in 1755. In his understanding of society there are three different categories of people:

- Landowners,
- Wage earners, and
- Entrepreneurs.

As for him entrepreneurs are the ones that induce economic balance by bringing together demand and offer; it is the ability to handle uncertain income which makes them unique. An interesting thing about Cantillon's definition is that he explicitly included beggars and thieves in categories of people as they live exactly in such an environment of uncertainty.

Following Cantillon many different concepts concerning the meaning of the word entrepreneur were evolved.

Table 1: Change of Understanding of the Term Entrepreneur over Time.

Time	Author	Definition
Late 18th century	Richard Cantillon	Bearer of risk and uncertainty
	Anne Robert, Jaques Turgot	Investor, whose income is based on profit, not on interest
	Adam Smith	Capitalist – self-interest driven user of capital
19th century	Jean Baptist Say	Carrier of information and coordinator
Early 20th century	Joseph Schumpeter	Creative destroyer
	John M. Keynes	Owner and decision-maker under uncertainty
Late 20th century	David McClelland	Energetic person who takes risks
	Peter Drucker	Seizer of business opportunities
	Israel M. Kirzner	Resourceful opportunist and information broker
	Albert Shapero	Person who shows initiative, organizes social and economic contexts and is able to accept the risk of failure

Although, these concepts evolved in different times and settings, all of them generally can be categorized in five groups; according to the function respectively role the entrepreneur plays in the society. Table 2 shows those different entrepreneurial aspects and the most important and prevailing academic proponents.

Table 2: The Five Aspects of an Entrepreneur and their Academic Proponents.

Function	Academic Proponents
Innovator	Schumpeter (1993), Fallgater (2001), Werner (2004), Aff (2006)
Founder	Werner (2004), Aff (2006)
Opportunist	von Mises (1940), Kirzner (1973), Freiling (2006)
Risk-bearer	Liles (1974), McGrath (1999), Malek (2004), Kollmann (2005), Jacobson (2006), Bröckling (2007)
Fulfiller of needs	von Mises (1940), Werner (2004)

The Five Aspects of an Entrepreneur – What Makes Her/Him so Special?

Innovator – Capability and Will to Innovate

In his role as innovator the entrepreneur evokes economic processes of change. He is driven by the wish to create something new and change existing patterns. For Schumpeter (1993) this is the most important driver of modern economy: the innovative destruction. Although, Schumpeter focuses on economic aspects, this also applies to other fields, especially for social problems. Thus, the entrepreneur makes an invaluable contribution to the progress of civilization overall by overcoming antiquated structures and pushing new ideas.

Founder – Founder of a Company

The economic understanding of founder is based on establishing her or his own economic base by founding a new organization; and, therefore, having the freedom of will and decision. Thus, it is closely linked to the risk-bearer concept as the risk of failure with all its implications always comes along with economic independence. On the other hand, this independence is what allows the entrepreneur to do what has to be done to fulfil his role as innovator and opportunist. Unlike employees or so called intrapreneurs – heteronomous entrepreneurs inside companies – which are incorporated in usually very rigid structures, the

real entrepreneur disposes of all opportunities he needs to grasp by being responsible only to her-/himself and her/his conscience (Aff, 2006/07).

Opportunist – Perceptual Capacity for Arbitrage

Economic opportunism means being aware of all opportunities and use each as good as possible (Torsvik, 2000). For an entrepreneur this awareness is a crucial skill. Kirzner (1973) even goes one step further and defines this alertness – the ability to make spontaneous discoveries without purposefully looking for them – as the most unique capability of the entrepreneur. For her or him the real entrepreneurial act is not seizing opportunities but finding them.

“Entrepreneurship does not consist of grasping a free ten dollar bill which one has already discovered to be resting in one’s hand, it consists in realizing that it is in one’s hand and that is available for the grasping.”

Israel M. Kirzner (1973)

Therefore, the entrepreneur

- finds not yet used opportunities and systematically unlocks them, or
- even generates such opportunities by activating latent demands (Freiling, 2006).

In economic terms, by doing so the entrepreneur balances offer and demand in the market.

Risk-Bearer – Risk Awareness and Readiness to Bear It

“I lack the fear gene. That’s what mad entrepreneurship possible for me.”

Rhonda Kallman (Mansueto Ventures LLC, 2004)

Although, entrepreneurs obviously have to have a higher readiness to assume risk Koch, et al. (2001), and Jacobson (2006) show that this is not the case. In fact, entrepreneurs seem to have a medium readiness to bear risk. But as they possess the ability to assess and control risk better than average, they are able to take risks others judge as too high just because they know that this is not true. Positively linked to success, this ability seems to be another important one for these special individuals (Jacobson, 2006). Not for nothing, risk usually goes hand in hand with opportunity.

In addition, entrepreneurs tend to accept failure far better than the average. McGrath (1999) calls this the principle of *Falling Forward* and explains that this not only includes anticipating and using the negative but also the positive impacts of making failures.

“One reason why failure offers benefits is because it is often easier to pinpoint why failure has occurred than to explain a success, making failure analysis a powerful mechanism for resolving uncertainty.”

Sim B. Sitkin (McGrath, 1999)

Fulfiller of Needs – Anticipation Based Will to Satisfy Customer Needs

Without customers any business is foredoomed. It is not the company owners or managers who make the decision to be successful, but the customers through their purchase behaviour (Von Mises, 1980). Thus, being a real entrepreneur always means to navigate as close to the real demand as possible. But this not just means to know what the market was or is about but more important what it will be about. Anticipating future trends and demands is perhaps the most important aspect of an entrepreneur as he can be as good as possible in all other aspects; without customers his business has absolutely no chance to flourish – and survive (Werner, 2004).

The Entrepreneur in Summary

It is not one or two of these aspects but the combination of all of those in her/his person is what makes the entrepreneur so special and what makes him different from all other sorts of business leaders (Pleitner, 2001).

Impact of Entrepreneurship

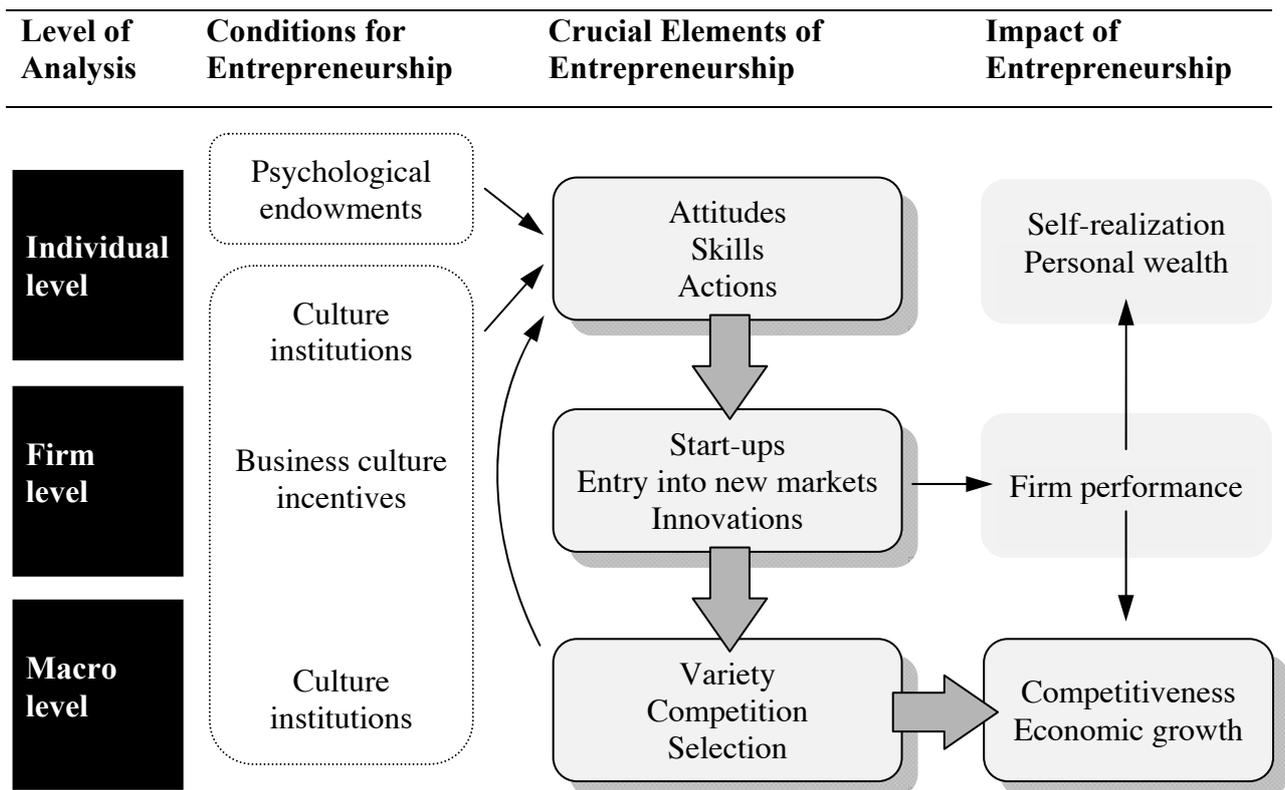
After knowing what an entrepreneur is, it is important to find out why we, as a society, need such individuals. History and science document several reasons to do so. Following are the most important and obvious ones.

Influence of Entrepreneurship on Economic Growth and Public Welfare

In fact, countries with a more positive attitude towards entrepreneurship across their citizens tend to have higher economic growth rates and lower unemployment rates, both of which result in increased public welfare. In their research paper for the Organisation for Economic Co-operation and Development (OECD) Audretsch, et al., (2001) show that this is not just

coincidence but a distinct result of an increasing entrepreneurial activity. Thus, fostering entrepreneurship education is a long term investment in future economic growth of the whole society. Figure 1 shows different ways of how these effects can emerge and how they are interconnected to each other (Carrer, et al., 2003). It also shows some of the initial factors for entrepreneurship already discussed above and, in anticipation of the following chapter, points out opportunities to positively influence the willingness to be entrepreneurial in our society.

Figure 1: Framework for Linking Entrepreneurship to Economic Growth (Carrer, et al., 2003).



Social Entrepreneurship

Profit orientation of businesses seldom results in satisfaction of basic needs in developing countries. This is because making profit, unfortunately, is often connected to more luxury goods as to basic needs (Simons, et al., 1987). On the other hand, donation based organisations often have to deal with managerial and organisational inefficiencies (Perlmutter, 1995). The new entrepreneur combines both – the efficiency of a profit based venture and the urge to feel useful respectively being recognized and acknowledged for what one does.

Social entrepreneurship: Using entrepreneurial spirit and efficiency of the private industry to solve social problems (Müller, 2009).

The best known organisation in this field today certainly is the Grameen Bank, respectively Grameen Foundation, founded by Dr. Muhammad Yunus 1983. Launching his idea into a business not only made Dr. Yunus an entrepreneur himself but with the money he has been lending to his customers thousands and thousands others more. The impact of this revolutionary concept not just consisted of financial independence of former poor people but also of a movement towards collaboration and mutual aid all over Bangladesh – and after being granted the Nobel Peace Prize in 2006 all over the world (Martin, et al., 2007).

Another very successful example is the SEKEM Initiative founded by Dr. Ibrahim Abouleish 1977 in Egypt with its “vision of sustainable human development” (Sekem Group, 2006).

Social entrepreneurship, as a result of enabling and encouraging people to implement their own innovative solutions for daily problems, is a major pillar of recent improvement of living conditions in developing countries (Seelos, et al., 2004, and Dees, 1998).

“Furthermore, we might as well take advantage of this explosion of social entrepreneurship. These are some of the smartest and most creative people in the country. Even if we don’t know how to reduce poverty, it’s probably worth investing in these people and letting them figure it out. – They won’t stop bugging us until we do.”

(Brooks, 2008)

Educating Entrepreneurs

So, we know now what entrepreneurs are and that this category of people is so beneficial for society. But how do we encourage people to act entrepreneurial, how do we train and educate them?

This chapter will briefly explain a five step approach to make sure that all five aspects identified in the first part come together in one person.

1. Sensitising and Encouragement

The very first step consists of making people aware that there are such opportunities to be independent and economic autonomous. This cannot happen too early – as children are

generally open-minded and receptive, workshops or even entrepreneurship classes would be very efficient. However, not only children are eligible for such awareness trainings. Anyway, the goal of such courses must not be pushing participants into something they do not want but making them aware of opportunities. Furthermore, such courses should show that developing one's own initiative is always helpful regardless what the future will be.

2. Assistance during Idea Generation Phase

Giving people the knowledge how to access and use their creative potential will also enable them to generate new ideas. There are many different techniques to do so, for example brainstorming, brainwriting, and synectics (Couch, 1993). In addition, it is important to show that even ideas that are regarded as crazy at the beginning of the day can be a solution at the end of it. Far too many people tend to judge and refuse such an idea right away without giving the thought-process a real chance to evolve. This does not mean that every thought should be executed blindly, but that it is important to be open in mind for unusual solutions.

3. Imparting Knowledge of Marketing Tools and Comprehension of Entrepreneurial Intuition

After having developed a scope of ideas one should be able to identify the needs of the people he wants to target with his business. A good understanding and feeling for the specific market segment is inevitable for such an attempt. Therefore, trainings about the application of different marketing tools and even more important about proper interpreting the results should be given.

4. Training of Ability to Identify and Assess Risk

Risk in business can never be avoided completely but increasing the understanding of risk makes it less intimidating. Having said this, it is inevitable to show prospective entrepreneurs typical risk patterns in business and ways to recognize them. This will improve their courage to engage risk in a proactive way what again results in more control over the situation – entrepreneurial risk management (McGrath, 1999). In addition, it is important to show people that failure is an often required learning method to be able to be successful and, therefore, definitely not bad in general (Ofman, 2009).

5. Qualifying for Business

The phase to build the basic business tools, for example fundamental accounting, business management, and how to write a realistic business plan and execute it, is the last topic which

has to be covered. There are many different approaches and offers on the market covering this. However, it is important to choose a practical and tailored method with appropriate case studies. Although, one would not think so in the first moment, these skills are also important for social entrepreneurs – perhaps even more than to others, as they usually act in a very small financial scope. Furthermore, failure in their case often has a serious impact on their environment – economically, socially, and ecologically.

Conclusions

The entrepreneur – who or what is that?

- An ***innovator*** who is able to change existing patterns and solve social problems?
- A ***founder*** who creates opportunities?
- An ***opportunist*** who understands and forms the market?
- A ***risk-bearer*** with a distinctive economic calculus?
- A ***fulfiller of needs*** who is driven by the will to satisfy current and future needs of people?

The entrepreneur is not just part of one of these categories – he combines all these characteristics in his own person.

Education and training entrepreneurs is not like teaching mathematics or history. The process is more based on making aware of opportunities, strengthening self-confidence, and setting the stage for people to develop and flourish their abilities. Thus, entrepreneurship education programs should be structured around following framework:

1. ***Sensitising and encouragement*** to create the necessary awareness.
2. ***Assistance during idea generation phase*** to help developing the basic business idea.
3. ***Imparting knowledge of marketing tools and comprehension of entrepreneurial intuition*** to enable the understanding of potential customers, their needs, and the market segment in general.

4. ***Training of ability to identify and assess risk*** to ensure proper risk management and foster the readiness to bear risks.
5. ***Qualifying for business*** to provide basic business tools and support developing necessary skills.

The positive influence of entrepreneurs on economy and society has been known since the 18th century and is still valid. Today, the trend to social entrepreneurship has an unprecedented chance to sustainably change the shape of our world. Therefore, fostering entrepreneurship education and giving people the required opportunities to unfold their entrepreneurial will and ability are not just investments in individuals but in the welfare of the whole society.

References

- Aff, Josef. (2006/07). „Entrepreneurship-Erziehung,“ *Wissenplus*, Heft1 | 2006/07, pp. I-VIII.
- Audretsch, D. B. and R. Thurik. (2001). “Linking Entrepreneurship to Growth,” *OECD Science, Technology and Industry Working Papers*, 2001/2. OECD Publishing. <<http://dx.doi.org/10.1787/736170038056>>. Accessed on January 30, 2009.
- Boeree, C. George. (2006). *Abraham Maslov*. <<http://webspaceship.edu/cgboer/maslow.html>>. Accessed on February 2, 2009.
- Bröckling, Ulrich. (2007). *Das unternehmerische Selbst. Soziologie einer Subjektivierungsform*. Frankfurt am Main: Suhrkamp.
- Brooks, David. (2008). “Thoroughly Modern Do-Gooders,” *New York Times*, March 21, 2008. <http://www.nytimes.com/2008/03/21/opinion/21brooks.html?_r=1>. Accessed on January 25, 2009.
- Cantillon, Richard. (1931). *Abhandlung über die Natur des Handels im allgemeinen (nach der französischen Ausgabe von 1755)*. Jena: Fischer.
- Carree, M. A. and Thurik A. R. (2003). “The Impact of Entrepreneurship on Economic Growth,” *International Handbook of Entrepreneurship Research*. New York: Springer.
- Casson, Mark. (1982). *The Entrepreneur. An Economic Theory*. Oxford: Robertson.

Couch, Richard. (1993). "Synectics and Imagery: Developing Creative Thinking Through Images," *Art, Science & Visual Literacy: Selected Readings from the Annual Conference of the International Visual Literacy Association (24th, Pittsburgh, PA. September 30 - October 4, 1992)*.

Dees, J. Gregory. (1998). *The Meaning of "Social Entrepreneurship"*. <http://www.partnerships.org.au/Library/the_meaning_of_social_entrepreneurship.htm>. Accessed on January 25, 2009.

Fallgatter, Michael J. (2002). *Theorie des Entrepreneurship. Perspektiven zur Erforschung der Entstehung und Entwicklung junger Unternehmen*. Wiesbaden : Deutscher Universitäts-Verlag.

Freiling, Jörg. (2006). *Entrepreneurship. Theoretische Grundlagen und unternehmerische Praxis*. München: Verlag Franz Vahlen.

Mansueto Ventures LLC (2004). *What quality or skill is the most critical to success as an entrepreneur?* <http://www.inc.com/magazine/20040401/25qa_6.html>. Accessed on July 02, 2008.

Martin, Roger L. and Osberg, Sally. (2007). "Social Entrepreneurship: The Case for Definition," *Stanford Social Innovation Review*. Stanford: Leland Stanford Jr. University. <http://www.skollfoundation.org/media/skoll_docs/2007SP_feature_martinosberg.pdf>. Accessed on January 28, 2009.

Jacobson, Liv Kirsten. (2006). *Erfolgsfaktoren bei der Unternehmensgründung. Entrepreneurship in Theorie und Praxis*. Wiesbaden: Deutscher Universitäts-Verlag.

Kirzner, Israel M. (1973). *Competition and Entrepreneurship*. Chicago: The University of Chicago.

Knight, Frank H. (2005). *Risk, Uncertainty and Profit*. New York: Cosimo.

Koch, Lambert T. and Zacharias, Christoph. (2001). *Gründungsmanagement mit Aufgabe und Lösungen*. München: Oldenbourg Wissenschaftsverlag.

Kollmann, Tobias [Ed.]. (2005). *GABLER KOMPAKT-LEXIKON. Unternehmensgründung*. Wiesbaden: Betriebswirtschaftlicher Verlag Dr. Th. Gabler.

Liles, Patrick R. (1974). *New business ventures and the entrepreneur*. Homewood, Illinois: Irwin.

Low, Murray B. and MacMillan, Ian C. (1988). "Entrepreneurship: Past Research and Future Challenges," *Journal of Management*, 14(2), pp. 139-161.

Malek, Mirosław and Ibach, Peter K. (2004). *Entrepreneurship. Prinzipien, Ideen und Geschäftsmodelle zur Unternehmensgründung im Informationszeitalter*. Heidelberg: dpunkt.verlag.

McGrath, Rita G. (1999). "Falling Forward: Real Options Reasoning and Entrepreneurial Failure," *Academy of Management*, Vol. 24, No. 1, pp. 13-30.

Müller, Susan. (2009). „Soziale Marktwirtschaft,“ *brand eins*, 01/2009. <http://www.brandeins.de/home/inhalt_detail.asp?id=2881&MenuID=130&MagID=109&sid=su1299719082303223&umenuid=1>. Accessed on February 02, 2009.

Ofman, Paul. (2009). "Entrepreneurs and Failure – Why you can benefit from big mistakes," *BusinessWeek*, SmallBiz Video. <http://feedroom.businessweek.com/index.jsp?fr_story=790c9e561c7221384a510c2cf1b43dc8c05d88c5>. Accessed on January 30, 2009.

Perlmutter, Felice D. and Cnaan, Ram A. (1995). "Entrepreneurship in the Public Sector: The Horns of a Dilemma," *Public Administration Review*, Vol. 55, No. 1, pp. 29-36.

Pleitner, Hans J. (2001). „Entrepreneurship - Mode oder Motor?“, *Zeitschrift für Betriebswissenschaft*, Vol. 10, pp. 1145-1159.

Pomerantz, Mark. (2003). „The Business of Social Entrepreneurship in A ‚Down Economy‘“, *In Business*, March/April 2003, p. 25. <http://www.jgpress.com/IBArticles/2003/MA_25b.htm>. Accessed on April 20, 2009.

Ramge, Thomas. (2009). „Klein, aber fein,“ *brand eins*, 01/2009. <http://www.brandeins.de/home/inhalt_detail.asp?id=2893&MenuID=130&MagID=109&sid=su1299719082303223&umenuid=1>. Accessed on February 02, 2009.

Richtermeyer, Gwen and Venters, Cassy. (2005). „Why is Entrepreneurship an Important Economic Development Strategy?“ presented at the National Association of Community Development Extension Professionals Conference, Las Vegas, NV, February.

<<http://www.ncrcrd.iastate.edu/nacdep/researchroundtable/2-richter-meyer-venters-handout.pdf>>. Accessed on April 25, 2009.

Schumpeter, Joseph A. (1993). *Theorie der wirtschaftlichen Entwicklung - Eine Untersuchung über Unternehmergewinn, Kapital, Kredit, Zins und den Konjunkturzyklus*. Berlin: Duncker und Humblot.

Schumpeter Joseph A. (2002). „Theorie der wirtschaftlichen Entwicklung,“ In: *The American journal of economics and sociology: publ. quarterly in the interest of constructive synthesis in the social sciences under grants from the Francis Nelson Fund and the Robert Schalkenbach Foundation*, Vol. 61, No. 2, pp. 405-437.

Seelos, Christian and Mair, Johanna. (2004). *Entrepreneurs in service of the poor: Models for business contributions to sustainable development*. Barcelona: IESE Business School. <http://www.iese.edu/cat/files/poor%20models%20for%20business_tcm6-15949.pdf>. Accessed on January 25, 2009.

Sekem Group. (2006). *Welcome to Sekem*. <<http://www.sekem.com/english/default.aspx>>. Accessed on February 2, 2009.

Simons, Janet A.; Irwin Donald B. and Drinnien, Beverly A. (1987). *Psychology – The Search for Understanding*. New York: West Publishing Company.

Sitkin, Sim B. (1992). “Learning through failure: The strategy of small losses,” *Research in organizational behaviour*, Vol. 14, pp. 231-266.

Temple, Nick. (2009). *Top 10 social entrepreneurship trends for 2009*. <http://socialentrepreneurs.typepad.com/the_school_for_social_ent/2009/01/top10-social-entrepreneurship-trends-for-2009.html>. Accessed on January 29, 2009.

Torsvik, Gaude. (2000). “Social capital and economic development,” *Rationality and Society*, Vol. 12, No. 4, pp. 451-476.

Von Mises, Ludwig. (1980). *Nationalökonomie. Theorie des Handelns und Wirtschaftens*. München: Philosophia Verlag.

Werner, Götz W. (2004). *Wirtschaft – das Füreinander-Leisten*. Karlsruhe: Universitätsverlag Karlsruhe.

The Will Matters in Networking

Raija Leskinen

The aim of this paper is to shed light on how entrepreneurial will affects the networking process of entrepreneurs who wanted to join together to co-create, co-innovate and co-develop new services. This paper explores the role of entrepreneurial will in the networking process. The methodological approach is a longitudinal multi-strategy case study. The data is collected during 2006-2008 of 28 entrepreneurs – primarily female. The data is analyzed by qualitative and quantitative methods. The results of the key findings show that entrepreneurial will affects the (i) commitment (ii) trust and (iii) dialogue during the entrepreneurial networking process.

Introduction

The growing importance of the emphasis on networks, collaboration, alliances and partnership has increased in recent years (Osborn & Hagedoorn, 1997; Ireland et. al., 2002). There is increasing evidence especially of the need to build a network for co-creation, co-innovation and co-operation among entrepreneurs. Micro firms with one to two employees account for 66 per cent of all Finnish 243,000 active firms. Women more often work alone than men. 74,000 (31%) firms are owned by women, 70% of them work alone and therefore have limited resources at their disposal. Thus increasing resources by networking is of vital importance to them. As the latest GEM survey indicates, it is also difficult to grow due to lack of resources. (Stenholm et.al., 2007)

The decision to build an entrepreneurial network is usually based on the need for different kinds of additional resources the entrepreneurs do not have, or then their resources are not adequate. For example, product and service development in micro firms is often difficult to organize due to lack of the resources. This leads to difficulties in maintaining competitiveness on the market. Competitive advantage can be created by developing and using unique combinations of inter-firm cooperative arrangements, e.g., networks, alliances, and joint ventures (Dyer and Singh, 1998). Networks can create synergistic or other benefits for the participants (Osborn & Hagedoorn, 1997; Gomes-Casseres, 1996).

Even though many micro firms would like to co-operate and build an entrepreneurial network they lack the *will* to do so. For good co-operation the *will* to be committed, to be trustworthy, to respect other entrepreneurs and to share information and knowledge is needed. Very few researchers have advocated longitudinal approaches to study networking process. Although some have applied this approach, more often it has been focused on the networking process of SMEs or large companies. The aim of this paper is to shed light on how entrepreneurial *will* affects the networking process of micro firms. Focusing on this gap, this paper explores the role of the *will* in the entrepreneurial networking process. This research is based on a two-year networking project of 28 entrepreneurs – primarily female, who wanted to join together to co-create, co-innovate and co-develop new services and products. On the basis of this study a conceptual framework is developed to describe entrepreneurial *will* during the networking process. The methodological approach of this study is a longitudinal multi-strategy case study. This case is based on a mix of quantitative and qualitative evidence. The data will be analyzed by qualitative and quantitative methods. The paper contributes to the entrepreneurial networking process of the micro firms.

The Entrepreneurial Networking Phenomenon

The networking phenomenon has started to attract considerable attention in the management and entrepreneurship literature (see for instance Aldrich & Zimmer, 1986; Birley, 1985; Jarillo, 1988; Johanson & Mattson, 1987; Szarka, 1990). Araujo & Easton (1996) distinguish different approaches to network research depending on their respective focus areas, for example social networks, networks of innovators, entrepreneurship studies, industrial networks etc. In its most abstract definition a network is a “structure where a number of nodes are related to each other by specific treads” (Håkansson & Ford, 2002, p.133). According to Möller & Wilson (1995) the term networks refers to exchange relationships between multiple firms interacting with each other. Relationships are developed and maintained primarily through everyday interaction. Through the interaction the entrepreneurs gradually, on the one hand, learn about each other’s needs, competencies, abilities, skills and strategies and come to trust each other, and on the other, adapt to each other’s way of performing operations and commit resources to the relationship (Forsgren & Johansson, 1992). According to Drakapolou et al. (2002) entrepreneurship has embraced networking theory as a mechanism for exploring the creation and development of new ventures.

According to Partanen et al. (2008) the creation of new knowledge has been shown to be an essentially local activity taking place within social and business networks between actors with different and complementary knowledge bases (Powell et. al., 1996). Evidence from entrepreneurship studies suggests that a key condition for firms to be innovative and grow is that they should have the ability to establish networks of partners (Jarillo, 1989; Lipparini & Sobero, 1994; Neergaard, 2005). Companies enter into business relationships and networks so that they can exploit and develop their resources, and create and maintain a durable basis for a competitive advantage (Day, 2000; Faulkner, 2003).

The entrepreneurial network phenomenon in the context of micro firms requires “both social relationships among individuals and interactions among organizations” (Melin 1987, p. 31). The entrepreneur will identify himself or herself strongly with the firm and, conversely, the firm tends to be strongly identified with its principal (Szarka, 1990). The character of business relationships is a consequence of the interaction strategies of the parties (Cunningham & Homse, 1982). The network is the framework which gives the entrepreneurs both opportunities and constraints in their business. Flexible entrepreneurial networks may support innovative activities, particularly when members are situated within a bounded area and share a common culture because this allows them to have frequent face-to-face interactions, so that they come to know and recognize each other (Dei Ottati, 1994). In business fields a number of more or less interrelated business activities are pursued for co-creation, co-innovation and co-development of new services or products. According to Forsgren & Johansson (1992) business relationships are established and developed by investing time and resources in interaction with each other, including adaptations of products, processes and routines. The consequence is that the firms learn about each other’s ways of doing things. Learning in the network requires interaction with entrepreneurs in the network. The entrepreneurial network can be the source of various resources for the micro firms; Hanlon & Saunders (2007) mention financial, physical, human, technological, reputational, and organizational resources.

The Entrepreneurial Networking Process

Social capital and relationships are key facilitators in the networking process (Ireland et. al., 2002; Jarillo, 1989; Lipparini & Soper, 1994). These are especially important in micro-firm networking process, where the organization is the same as the individual – the entrepreneur. Social capital is a kind of bridge-building process that links individuals and creates a relationship for the

effective exchange of information and resources (Anderson & Jack, 2002; Knoke, 1999). According to Nahapiet & Ghoshal (1998) the social capital is a sum of resources embedded within, available through, and derived from the network of relationships by an individual or a social unit. These relationships are affected by the dialogue among entrepreneurs, based on the trust between entrepreneurs and enhance the commitment to the entrepreneurial networking process.

According to Isaacs (1999) the key principles among others in a good dialogue are 1) listening and 2) respecting. He argues that we should not listen only to others, but also ourselves and our own reactions. To respect someone means to look for the springs that feed the pool of others' experience. Dialogue is an arena where people can integrate different opinions and views, and create and share collective meanings. A dialogue is a conversation between two or more people. Many different aspects can be connected to dialogue. A dialogue has some unique properties in its flow, in its creativeness, and in its inquiring nature. According to Roman (2005) dialogue is a process that creates more understanding, maintains togetherness, and unites the intelligences and creativity of participants, which can lead to many good outcomes. Dialogue in itself does not always have such a clear meaning or goal; instead it is a process that supports many other goals. Some researchers have strongly emphasized the value of dialogue and it is seen as an important communication process to enhance the competitive ability of firms (see e.g. Nonaka & Takeuchi 1995, Senge 1990, Schein 1993, 1996, 1999a, 1999b, Stähle 1998). Stähle and Grönroos (1999) say that dialogical conversation among those involved creates common meanings, gives timely information on what is going on and can only happen in face-to-face meetings. Senge (1990) argues, that "dialogue is at the root of all effective group action". Nonaka and Takeuchi (1995) states that dialogue is a means for transforming tacit knowledge into explicit knowledge. He also claims that the most important thing in organizations is to create new knowledge, which happens in the interaction between tacit and explicit knowledge. Furthermore, Nonaka and Takeuchi (1995) believes that sharing tacit knowledge is a crucial element in the knowledge-creating process of companies. Tacit knowledge exists in people, the way attitudes, competencies, abilities, skills and insights do, and are difficult to express using words. Nonaka and Takeuchi claims that we have to foster communication to make tacit knowledge shared and created, and to support the interaction between tacit and explicit knowledge.

Through dialogue we create new explicit concepts, which can be called creating shared assumptions or meanings. Perhaps the idea of shared meaning includes that the meaning is not just

articulated, others also understand it. Therefore creating collective meaning is a process in which all the modes Nonaka and Takeuchi have articulated occur. According to Roman (2005) through dialogue the participants can explore their own and others conditions, thoughts, aspirations, beliefs, and preoccupations. Through dialogue, people connect with each other, and share different views of reality. The stimulation received from the energy that is released in dialogue may push him into creativity he did not know he had. Dialogues can also have positive side effects on the health of the workers and wellbeing. De Maré (1991, p. 94) says, “The culture of the group is no longer an atmosphere that is being acted out”, which means that tensions are acted out by expressing them. With dialogues, people can root themselves deeper into the group, and also be more themselves in the group. As Burbules (1993) argues it is a language of listening, where participants are *willing* to hear each other’s contributions. Listening is respecting others.

A good dialogue enhances mutual trust during the networking process. The second organizational factor during the networking process is the trust – to be trustworthy and to trust. According to Neergaard & Ulhøi (2006) a certain level of mutual trust is necessary to prevent unreliable information from spreading, to prevent agreements from being violated, and to ensure the sharing of services and knowledge in the networking process. Moreover, due to the high degree of transparency and mutual trust, useful knowledge and experiences can more readily become available to others, who may then add additional features and/or improvements to differentiate their own service or product. Trustworthy behavior is closely related to the relationship between individuals (Neergaard & Ulhoi, 2006). Previous research has also shown that a higher degree of trust tends to be associated with a higher degree of co-operation (Parks & Hulbert, 1995).

Halinen (1994) distinguishes between general and specific trust. The first is necessary for initiating new relationships when people are unfamiliar with each other. It is not related to any specific individual and is interpreted as a lack of distrust in a prospective partner’s behavior, as opposed to expecting opportunistic behavior. According to Halinen numerous positive experiences involving trustworthy relationships increase generalized trust, whereas negative experiences reduce it. Generalized trust is thus a rather vague concept. Secondly, specific trust is defined much more precisely. It is crucial to the further development of a relationship, typically occurring where an exchange partner shows genuine responsiveness to the other partner’s needs.

Powell & Smith-Doerr (1994) identified two types of trust that vary with network structure. In contractually-based networks, calculated or deterrence based trust, arising from reputation, must be created if these relationships are to last. It has also been documented that firms would like to cooperate with partners who have demonstrated their trustworthiness and cooperativeness in their contexts, suggesting that reputation has an economic value (Hill, 1990). Such relationships are not necessarily regulated by contract and are thus similar to Halinen's generalized trust concept. Knowledge-based trust occurs in socialized networks, building on mutual awareness and norms to reciprocity, past experience and advantages of group membership. Entrepreneurs learn from each other and develop trust around norms of equity, through ongoing interaction (Shapiro et al., 1992). Consequently, it is a concept that carries some of the characteristics of Halinen's specific trust.

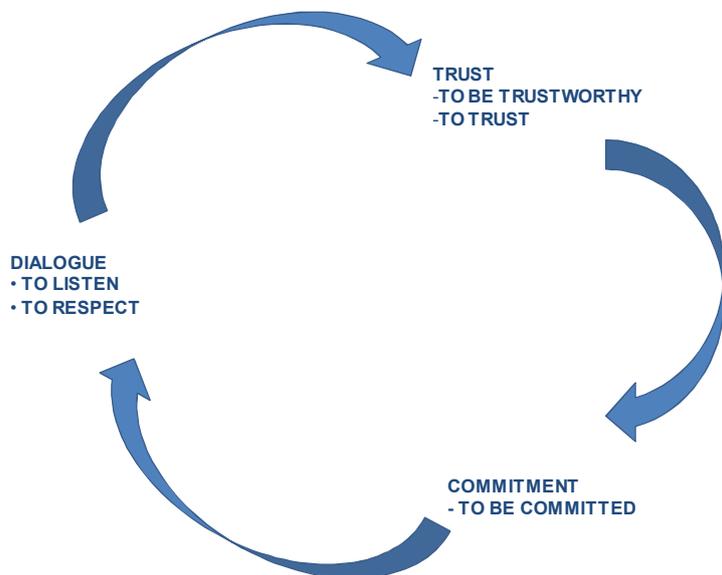
Williamson (1996) proposes three types of trust: (1) calculative, (2) societal, and (3) personal trust. The calculative trust seems to presume that individuals make trust choices based on rationally derived costs and benefits, e.g., "to proceed with relationship only if net gains can be projected or definite benefits identified" (Williamson, 1993, p. 467). Such an interpretation reflects the essential position that humans and hence organizations are opportunistically predisposed. Personal trust is rational and reserved only for very special personal relations, such as family and close friends; it would be seriously impaired if a calculative orientation were permitted (Williamson, 1996). Furthermore, trust is diminished by opportunistic behavior or self-interest seeking with guile (Williamson, 1985), which may include not only the more obvious forms of cheating, but also clearly calculated methods of misleading, distortion, disguise, and confusion; in the other words, any action carried out in bad faith (Hill, 1990). Such behavior is much more likely when actors are independent competitors. However, not all entrepreneurs may behave opportunistically, even if they are competitors, the mere possibility of such negative behavior means that parties have to hedge against uncertainties through a variety of formal contractual means (Williamson & Ouchi, 1981). According to Neergaard & Uhløi (2006), from a network standpoint, trust reduces the need to guard against opportunistic behavior, while excessive formalization and monitoring easily breeds conflict and distrust.

Trust affects and is likely to involve commitment to a relationship, where commitment is defined as "an implicit or explicit pledge of relational continuity between exchange parties" (Dwyer et al. 1987, p. 19). Commitment is the third organizational factor of the entrepreneurial networking process. Tangible indicators of commitment include, e.g., the resources, time, and effort put into the

relationships. Each firm's commitment to the relationship is influenced by making its perception of the other firm's commitment (Anderson & Weitz, 1992). The evolution of the interaction in business relationships between firms can be described as a social exchange process, in which the firms, conceptualized as collective actors (Emerson, 1981), interactively increase their commitments to the relationships (Dwyer et al., 1987; Gundlach et.al., 1995; Geyskens et al., 1996). A *willingness* to continue the relationship in the network, to learn each other's needs and resources imply strong, more or less continuous, commitment to the relationships, as does the adaption of routines and procedures. As entrepreneurs in the network are necessarily involved, these commitments are likely to contribute to the reciprocity of the relationships. Through their ongoing interaction, the entrepreneurs signal to each other that they are interested in developing the relationships at the same time as they raise their dependence on each other.

All these three organizational factors - dialogue, trust and commitment – as influences on the networking process are dynamic both in themselves and in terms of interaction with the other factors (see Figure 1).

Figure 1:
Triangulation of the Dialogue, Trust and Commitment during the Networking Process



Entrepreneurial Will in the Networking Process

The entrepreneurial networking process is additionally affected by entrepreneurial *will*, especially in micro-firm networks, which are based on the individual behavior of the entrepreneurs. According to Schumpeter (1934) the entrepreneur is driven by the *will* to prove him/herself superior to others as well as the joy of exercising one's energy and ingenuity (Andersen, 2007). This Schumpeterian statement was primarily related to individual entrepreneurs – entrepreneurs characterized by the desire and the *will* to found private kingdoms, the *will* to conquer, and the joy of creating. Schumpeter's reasoning has remained a basic point of reference for many of his successors, both for those who follow his tradition of regarding the entrepreneur as an innovative path breaker (e.g., Baumol, 1968, 1990; Dahmén, 1950; Leibenstein, 1968) and those economists who put forward alternative interpretations of the entrepreneur (e.g., members of the Austrian School represented by von Hayek, von Mises, and more recently, Kirzner, 1973). (Cornelius et al., 2006).

According to Ruohotie & Koiranen (2000) there is a *will*, which includes internal and external goal-orientation, fear of failure, need for achievement, self-esteem, belief in one's own abilities and possibilities. Volitional structure involves among others, persistence, *will* to learn, endeavour or effort, mindfulness in learning, intrinsic regulation and evaluation processes, as well as different control strategies (Ruohotie & Koiranen, 2000). According to Kyrö (2008) motivation precedes volitional processes to formulate the goals, but volition guides in setting clear goals as well as the enactment and realization of the decision. Our values and attitudes regard as valuable guides our *willingness* and interest to consider opportunities and interest to start a new business or be committed in the network process.

According to Ketz de Vries (1977) entrepreneurial behavior includes personality traits, which do not function in a structured social environment, and have difficulty accepting authority and working together with others. According to McClelland entrepreneurs are people who have a great need for achievement, self-confidence, independent problem-solving skills, and who prefer situations that are characterized by acceptance of individual responsibility. Interest has also been directed at entrepreneurs' attitudes (Filion, 1997). A great desire for autonomy (independence) is associated with entrepreneurs, too (Parker, 2004). Entrepreneurs want to be in control of their own work

situation and therefore appreciate “being one’s own boss”; a thought that can be traced back to Knight (1921).

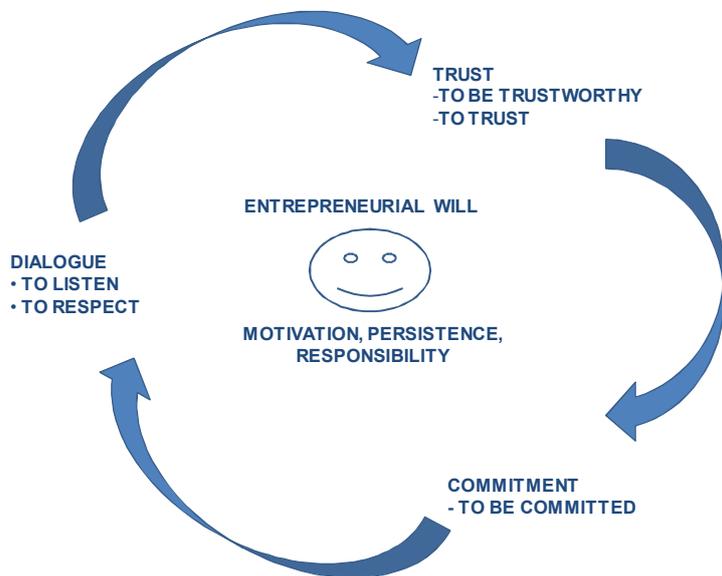
In this research there are three entrepreneurial *will* factors to be surveyed. These are the following: 1) motivation, 2) persistence and 3) responsibility. The first entrepreneurial *will* factor is motivation. Motivation means that some people are self-directed and have their own motivation to do things. Some people are externally motivated. Entrepreneurs are mostly self-directed and have their own motivation. They enjoy trying new things and like to seek new opportunities. Mostly they are motivated after successfully completing an assignment or project at work. They find learning stimulating, interesting and want to learn more.

The second entrepreneurial *will* factor is persistence. It is also a very typical personal characteristic of entrepreneurs. Persistence means that some people have a high and systematic persistence, others are more spontaneous or have little or even very low persistence. If people have high persistence, they like to work from start to finish and see that things are completed. They make every attempt to follow through with each one of their projects or work assignments, even when they are difficult. They prefer to work systematically and no one has to remind them to get the work to done. They do not like to be interrupted in the middle of one project to start working on a new one.

Responsibility is the third entrepreneurial *will* factor. A strong sense of responsibility means that people do what they have promised to do. If they have a low sense of responsibility, they must be reminded by other people to do things. If people have strong responsibility, they always like to do what is considered right. They do not have to be reminded to do things and always take their duties seriously. They like to be reliable and do their best to keep their promises.

These three entrepreneurial *will* factors affect the organizational factors - dialogue, trust and commitment – and as influences on the networking process are dynamic both in themselves and in terms of interaction with the other factors (see Figure 2).

Figure 2:
Entrepreneurial Will Factors in the Triangulation with the Organizational Factors



Data Collection and Methodology

The methodological approach is a longitudinal case study. According to Eisenhardt’s (1989) and Yin’s (1989) approaches the methodological approach of this study is a longitudinal case study. In this networking process data is collected in a “real organizational context”. The data were collected on the 28 entrepreneurs during the networking project 2006 – 2008. The data were collected from beginning to end, based on interviews and structured questionnaires on the individual and on the group level. The entrepreneurial networking process was analyzed in the entrepreneur – primarily female and entrepreneurial networking context. The research strategy is multi-strategy case study, in which the qualitative method is combined with quantitative research methods (Kanter, 1977). This case study is from one single networking process. A longitudinal multi-strategy case study approach was considered a suitable methodological choice because it enables the observation of the focal phenomenon over time in its natural context (Pettigrew, 1997). These are both relevant aspects in the analysis of the relationships involved in networking in the different phases of the process. The case approach is particularly relevant in the entrepreneurs and entrepreneurial networking context, in which it is important to understand individual-level behavior (Davidsson et al., 2004;

Ireland et al., 2005). In this study the network is built between entrepreneurs operating on the service market. In this research design samples combining different levels of analysis constitute meaningful analysis.

Research Findings and Discussion

Firstly this article was concerned with the definition of relevant parameters influencing the entrepreneurial networking process in the entrepreneur and entrepreneurial networking context, the clarification of their potential influence on the entrepreneurial networking process and exploration of the way in which they might interact with one another. Out of this it was hoped would emerge a 'model', which, if not predictive, would facilitate understanding of the key areas of entrepreneurial *will* factors in the entrepreneurial networking process that might be influenced by purposive interventions.

It is relatively easy from a review of the literature to draw out those parameters, which seem to be of major influence in the entrepreneurial networking process. These can be divided into 1) organizational and 2) entrepreneurial factors. In this research the organizational factors were dialogue, trust and commitment during the entrepreneurial networking process and entrepreneurial *will* - including motivation, persistence and responsibility - were the key entrepreneurial factors.

In this study 28 entrepreneurs were interested in working together and the goal was to build an entrepreneurial network for future co-operation. The entrepreneurs did not know each other. They came from different business branches; the network included coaches, a dancer, health care people and a renovator. They differed in experience, background, age and education.

Results of the Organizational Factors

The preliminary results of the organizational factors indicate that entrepreneurs found that dialogue (see Figure 3) was useful in the network process. Sixteen entrepreneurs reported that dialogue was good in ideation/co-creation, 17 found that dialogue was good in group building and 17 that it enhanced creativity in the entrepreneurial network. Fifteen entrepreneurs learned to listen to other entrepreneurs, but only 10 reported that they had learned to respect each other. Thirteen entrepreneurs found that the dialogue enhanced co-operation, and in total 15 out of 19 reported that dialogue is the most important factor in interaction.

Figure 3:
Results of the Dialogue in the Entrepreneurial Networking Process

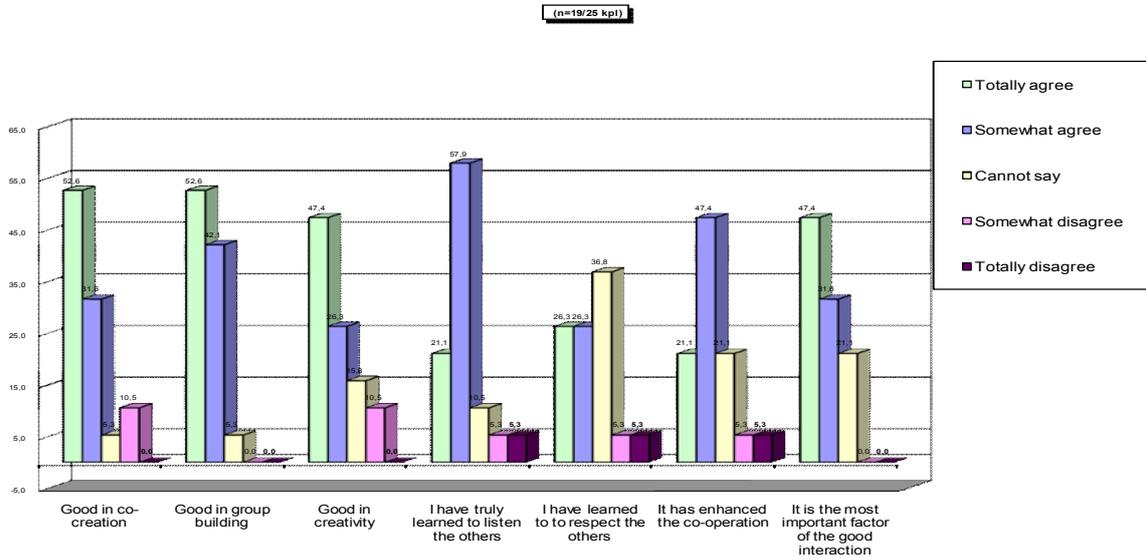
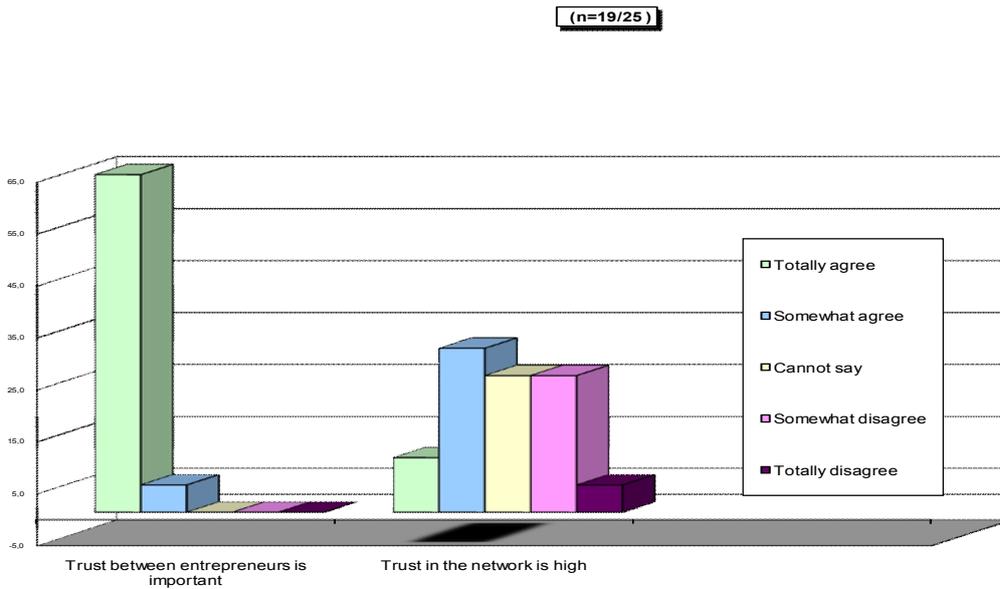
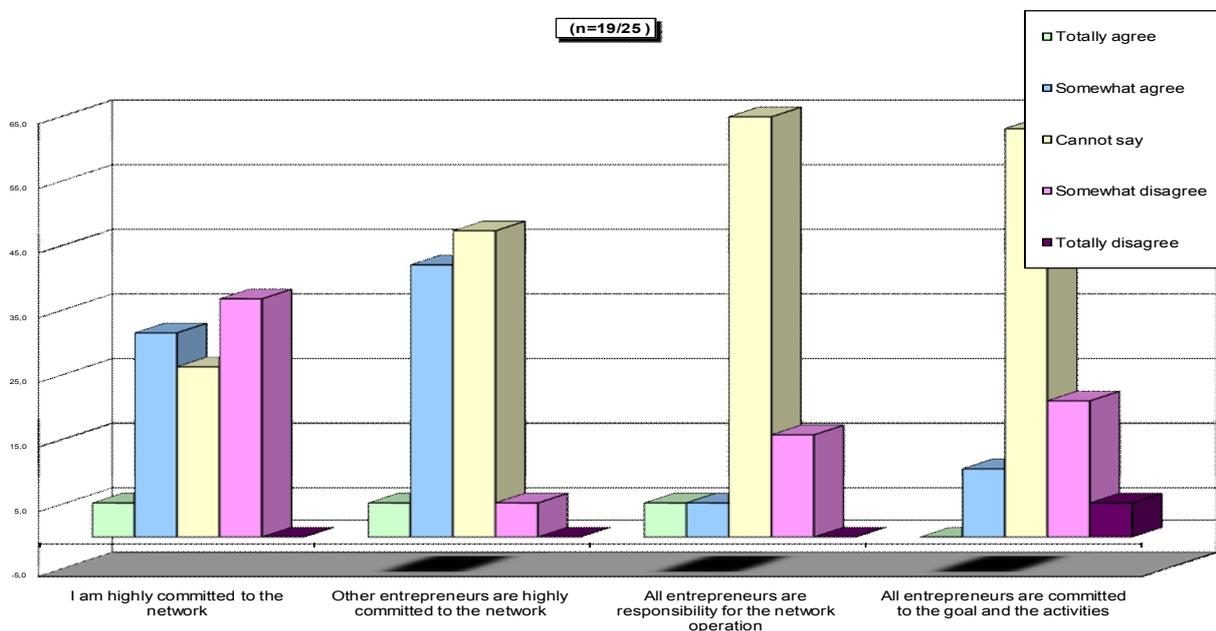


Figure 4:
Results of the Trust in the Entrepreneurial Networking Process



Secondly trust was one of the main factors in building relationships for future co-operation among entrepreneurs during the entrepreneurial networking process. All participants reported that trust between entrepreneurs was important (see Figure 4). To the statement, if “the trust between entrepreneurs is high”, a total of 18 entrepreneurs fully agreed and one somewhat agreed. The statement “the trust in the network is high”, was more challenging. Two entrepreneurs fully agreed, six somewhat agreed, but five were uncertain and could not say, six responded that the trust in the network was not high – five somewhat disagreed and one totally disagreed.

Figure 5:
Results of the Commitment in the Entrepreneurial Network



The networking process cannot succeed if the entrepreneurs are not committed to the process. At the beginning of the networking process entrepreneurs were asked about their commitment to the networking process and all were committed to the process. During the first year the situation changed and 19 out of 25 entrepreneurs were active, participated in meetings, were committed to the networking process and responded to this survey (see Figure 5). Other entrepreneurs were so overloaded with the work assignments and/or had problems with their health. Their participation in the networking process was variable. Later on some of entrepreneurs were not committed and not present in the meetings. Those who were committed found this behavior disturbing. Only one entrepreneur was strongly committed. She was present at all meetings. Six entrepreneurs were quite

committed, five were uncertain and could not say, and seven out of 19 were not committed. To the statement “other entrepreneurs are highly committed to the network”, one fully agreed, six somewhat agreed, but 14 were uncertain and could not say, three somewhat disagreed. Regarding the statement “all entrepreneurs carry responsibility for the network operation”, most entrepreneurs were uncertain and could not say. One totally agreed, one somewhat agreed, and three somewhat disagreed. The last statement about commitment was “all entrepreneurs are committed to the goal and activities”, two entrepreneurs somewhat agreed, 12 were uncertain and could not say, and five disagreed.

Results of the Entrepreneurial Factors

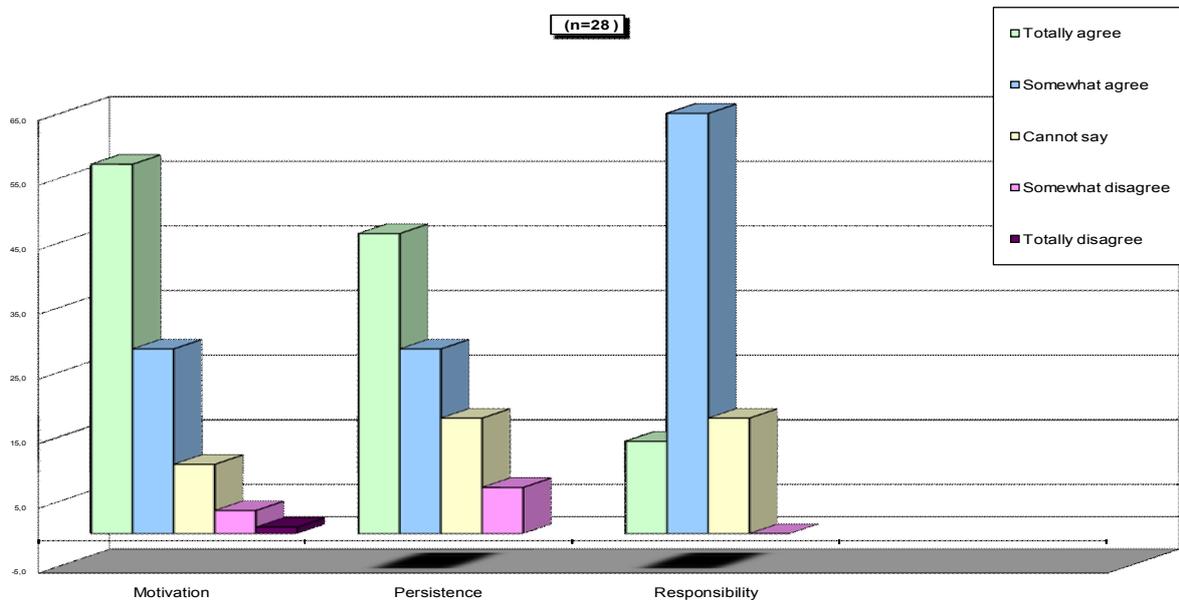
In this study the following characteristics were surveyed as entrepreneurial *will* factors; motivation, persistence and responsibility (see Figure 6). Entrepreneurs are mostly self-directed and have their own motivation. They enjoy trying new things and like to seek new opportunities. Mostly they are motivated after successfully completing an assignment or project at work. They find learning stimulating, interesting and want to learn more. All 28 entrepreneurs responded to this survey. 16 out of 28 had high own motivation, nine had somewhat own motivation, three cannot say and only one like to be sometimes externally motivated. Nobody was *willing* to be always externally motivated.

Second a very typical personal characteristic of entrepreneurs is persistence. Entrepreneurs have mostly high persistence and they like to work from start to finish and see that things are completed. They make every attempt to follow through with each one of their projects or work assignments, even when they are difficult. They prefer to work systematically and no one has to remind them to get the work to done. They do not like to be interrupted in the middle of one project to start working on a new one. The results of this research indicates that 13 out of 28 were highly persistence, eight somewhat persistence, five cannot say and two had somewhat low persistence. There was nobody with low persistence.

Responsibility is the third entrepreneurial *will* factor. Entrepreneurs have mostly strong responsibility. They always like to do what is considered right. They do not have to be reminded to do things and always take their duties seriously. They like to be reliable and do their best to keep their promises. In this research four out of 28 had a strong responsibility, 20 out of 28 had

somewhat strong responsibility, five cannot say and nobody had somewhat low or very low responsibility.

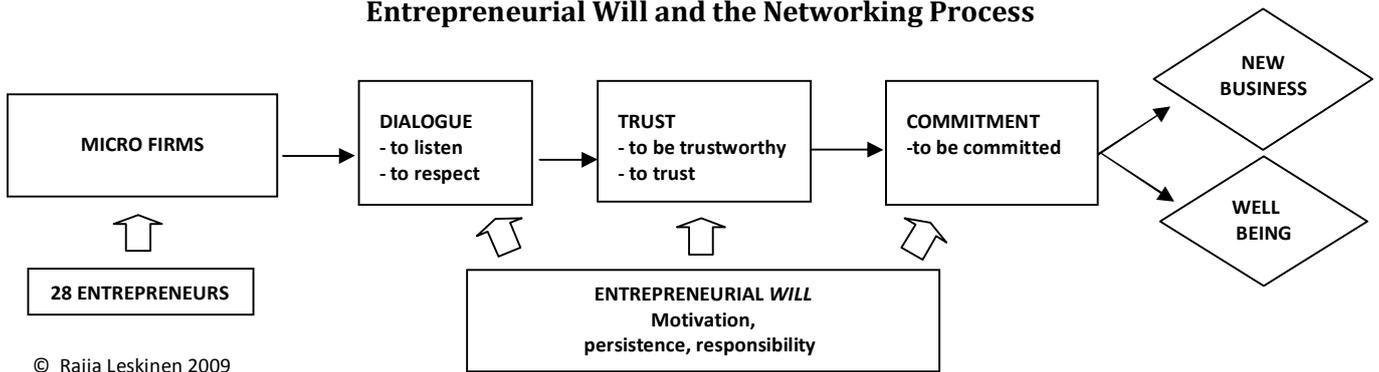
Figure 6:
Entrepreneurial Will Factors: Motivation, Persistence and Responsibility



This study sought to research the role of entrepreneurial *will* and how it affects the entrepreneurial networking process. As a result of these interviews and semi-structured questionnaires we found that entrepreneurial *will* factors – including motivation, persistence, responsibility - had a very important effect during the entrepreneurial networking process. As a result of the networking process three small nets were built, including nine entrepreneurs. The role of entrepreneurial *will* in the entrepreneurial networking process was especially important for the nine entrepreneurs who continued to have a business relationship after the networking process. Two of these nets including five entrepreneurs are engaging in business and co-operation in the health care business, the third net includes entrepreneurs from diverse business areas; one renovator, one dancing teacher and two coach. The two health care nets are operating on the traditional health care business, mainly offering services to private customers. The third has developed new, innovative wellbeing services for companies.

Figure 7:

Entrepreneurial Will and the Networking Process



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The results indicate that *will* matters in the entrepreneurial networking process. Out of this research was emerged the 'model' (see Figure 7), which facilitate understanding of the key areas of entrepreneurial *will* factors in the entrepreneurial networking process. Due to entrepreneurial *will* the entrepreneurs listen to each other in the dialogue among other entrepreneurs. Listening enhances respect. Through entrepreneurial *will* entrepreneurs build trust and are trustworthy, if they want to co-operate with other entrepreneurs. Entrepreneurs are *willing* to co-operate and to commit to the networking process, if other entrepreneurs are committed, motivated, persevering and responsible. All these entrepreneurial *will* factors affect the networking process in the triangulation with dialogue, trust and commitment. The triangulation of the organizational factors - dialogue, trust and commitment – combined with entrepreneurial *will* factors influencing the networking process are dynamic both in themselves and in terms of interaction with the other factors.

Conclusions

This paper considers the role of *will* in the entrepreneurial networking process. In the networking process entrepreneurs found that *will* in the entrepreneurial networking process affects 1) the entrepreneur's commitment to the networking process, 2) trust building – to trust and to be trustworthy – during the networking process 3) dialogue. In dialogue entrepreneurial *will* matters, if entrepreneurs listen to and respect other entrepreneurs. According to the interviews with entrepreneurs, a good networking relationship cannot be established without the trust and commitment of the entrepreneurs to the network operation. During the networking process entrepreneurs found that dialogue was good and enhanced creativity. Most of the entrepreneurs found that dialogue enhanced co-operation and some entrepreneurs found that dialogue had helped them to perceive others positively and decreased contradictions. The most of them reported that

dialogue is the most important factor in interaction. These organizational factors triangulated with entrepreneurial *will* factors and affected the entrepreneurial networking process. Entrepreneurial *will* factors, of which the most important were; (i) motivation, (ii) good persistence, (iii) strong sense of responsibility.

The results indicate that entrepreneurial *will* factors – motivation, persistence, responsibility - affect and matter during the networking process in the triangulation with dialogue, trust and commitment. Entrepreneurs combined their activities in the networking process to produce new services. Embodied in a network of such enduring relationships, dialogue is particularly useful and effective in domains such as the introduction of the new products and services in new markets. It enhanced trust and commitment during the networking process, which all are based on entrepreneurial *will* to be committed, to be trustworthy, to respect other entrepreneurs and share information and knowledge. Good network co-operation is based on good relationships between the actors. Co-operation in the entrepreneurial network shapes tomorrow by giving entrepreneurs tools for navigating the emerging world. Through co-operation entrepreneurs can have a major impact on competitiveness. Competitive advantages can be created through co-operation in the entrepreneurial network. This entails a great opportunity to take hold of the future by making conscious choices in the business and wellbeing of the entrepreneurs in the entrepreneurial network.

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References:

- Aldrich, H., C. Zimmer (1986): Entrepreneurship through social networks. In: *The Art and Science of Entrepreneurship*, 3–23. Eds. Donald L. Sexton & Raymond W. Smilor. Cambridge: Ballinger Publishing Company.
- Andersen, E., S. (2007): Schumpeter's evolution –emergence and extension of a dramatic theory of economic and social evolution as reflected in his major books. Forthcoming book.
- Anderson, A., R., Jack, S., L. (2002): The articulation of social capital in entrepreneurial networks: A glue or lubricant? *Entrepreneurship and Regional Development* 14, pp. 193–210

- Anderson, E., Weitz, B. (1992): The use of pledges to build and sustain commitment in distribution channels. *Journal of Marketing Research*, 29, pp. 18-34.
- Araujo, L., Easton, G. (1996): Strategy: Where is the Pattern? *Organization*, Vol. 3, No. 3, 361-383.
- Baumol, W., J. (1968): Entrepreneurship in economic theory. *American Economic Review*, 58(2), 64-71.
- Birley, S. (1985): The role of networks in the entrepreneurial process, *Journal of Business Venturing* 1, pp. 107-117.
- Burbules, N. (1993): *Dialogue in Teaching. Theory and Practise*. New York: Teacher Collage, Columbia University.
- Cornelius, B., Landström, H., Persson, O. (1973): Entrepreneurial Studies: The Dynamic Research Front of a Developing Social Science. *Entrepreneurship Theory and Practice*, May, 2006, 375-398.
- Cunningham, M.T., Homse, E. (1982): An interaction approach to marketing strategy, in Håkansson, H. (Eds), *International Marketing and Purchasing of Industrial Goods*, John Wiley & Sons, New York, NY.
- Dahmén, E. (1950): *Svensk industriell företagsverksamhet (Business Activities in Sweden)*. Stockholm: IUI.
- Davidsson, P., Achtenhagen, L., Naldi, L. (2004): Research on small firm growth: A review. *Proceeding of the European Institute of Small Business*.
- Day, G., S. (2000): "Managing Market Relationships." *Journal of the Academy of Marketing Science*, 28 (1), pp. 24-30.
- de Maré, P., Piper, R., Thompson S. (1991): *Koinonia, From Hate, through Dialogue to Culture in the Large Group*. Karnac Books.
- Dei Ottati, G. (1994): Trust, interlinking transactions and credit in the industrial district. *Cambridge Journal of Economics*, 18, 529-546.
- Drakapolou, S., Patra, E. (2002): National Differences in Entrepreneurial Networking. *Entrepreneurship, Theory & Practice* Vol. 14, pp. 117-134.
- Dwyer R., F., Schurr, P., H., Oh, S. (1987): Developing byer-seller relationships. *Journal of Marketing*, 51(2), pp. 11-27.
- Dyer J., H., Singh, H. (1998): The relational view: Cooperative strategy and sources of inter-organizational competitive advantage. *Academy of Management Review*, 23(4): 660-679.
- Eisenhardt, K. (1989): Building Theories from Case Study Research. *Academy of Management Review* 14(4):532-50.
- Faulkner, D. (2003): "Cooperative Strategy: Strategic Alliances and Networks." In *The Oxford Handbook of Strategy, Volume II: Corporate Strategy*, Faulkner, D. O. and Campbell, A., eds., Oxford University Press, New York, pp.118-156.
- Filion, L., J. (1997): From Entrepreneurship to Entreprenology." Paper presented at the 42nd ICSB World Conference, San Fransisco
- Forsgren, M., Johansson, J. (1992): *International Studies in Global Change: 2 Managing Networks in International Business*. London: Gordon and Breach.

- Geyskens, I., Steenkamp, J.E.B.M., Scheer, L.K., & Kumar, N. (1996): The effects of trust and interdependence on relationship commitment: A trans-Atlantic study. *International Journal of Research in Marketing*, 13(4), pp.303-317
- Gomes-Casseres, B. (1996): "Alliance Strategies of Small Firms". *Small Business Economics* 9: 33–44, 1997. *Kluwer Academic Publishers. Printed in the Netherlands*. Final version accepted on May 21, 1996. *Graduate School of International Economics and Finance, Brandeis University, Waltham, MA 02254-9110*
- Gundlach, G., T., Achrol, R., S., Mentzer, J., T. (1995): The structure of commitment in exchange. *Journal of Marketing*, 59, pp. 78-92.
- Håkansson, H., Ford, D. (2002): "How should Companies Interact in Business Environments." *Journal of Business Research*, 55 (2), pp. 133-139.
- Halinen, A. (1994): Exchange relationships in professional services. Unpublished doctoral dissertation, Turku School of Economics and Business Administration, Turku, Finland.
- Hanlon, D., Saunders, C. (2007): Marshaling resources to form small and new ventures: Toward a more holistic understanding of entrepreneurial support. *Entrepreneurship Theory and Practice*, 31(4):619-641.
- Hill, C., W. (1990): Cooperation, opportunism and the invisible hand: Implications for transaction cost theory. *Academy of Management Review*, 15, 500-513.
- Ireland, R., D., Hitt, M., A., Vaidyanath, D. (2002): "Managing strategic alliances to achieve a competitive advantage." *Journal of Management*, 28(3): 413-441.
- Ireland, R., D., Reutzell, C.R., Webb, J., W. (2005): Entrepreneurship research in AMJ: What has been published, and what might the future hold? *Academy of Management Journal*, 48 (4), 556-564.
- Isaacs, W. (1999). *Dialogue*. Routledge....
- Jarillo, J., C. (1988): On strategic networks. *Strategic Management Journal*, 9, 31-41.
- Jarillo, J., C. (1989): Entrepreneurship and growth: The strategic use of external resources, *Journal of Business Venturing* 4 (1989), pp. 133–147.
- Johanson, B., Mattson, L., G. (1987): Inter - Organizational Relations in Industrial Systems – a Network Approach compared with the Transaction-Cost Approach. *International Studies of Management and Organization*, Vol, 17, No.1, pp.34-48.
- Kanter, R. (1977): *Men and women of the corporation*. New York: Basic Books.
- Ketz de Vries, M., F., R. (1997): The Entrepreneurial Personality, *Journal of Management Studies* 14, pp. 34-57.
- Kirzner, LM. (1973): *Competition and entrepreneurship*. Chicago: Chicago University Press.
- Knight, F., H. (1985 (1921)): *Risk, uncertainty and profit*. Chicago: University of Chicago Press.
- Knoke, D. (1999): Organizational networks and corporate social capital. In: R. Leenders and S. Gabbay, Editors, *Corporate Social Capital and Liability*, Kluwer, Boston, pp. 17–42.
- Kyrö, P. (2008): A theoretical framework for teaching and learning entrepreneurship. *International Journal Business and Globalisation*, Vol. 2(1) 2008.
- Leibenstein, H. (1968): Entrepreneurship and development. *American Economic Review*, 58, 72-83.

- Lipparini, A., Sopero, M. (1994): The glue and the pieces: Entrepreneurship and innovation in entrepreneurial networks, *Journal of Business Venturing* 9 (2), pp. 125–140.
- Melin, L. (1987): The field-of-force metaphor: a study in industrial change. *International Studies of Management and Organization*, XVII:1, pp. 24-33.
- Möller, K. & Wilson, D. (1995): Business Marketing. An Interaction and Network Perspective.
- Nahapiet, J., & Ghoshal, S. (1998): Social capital, intellectual capital, and the organizational advantage, *Academy of Management Review* 23 , pp. 242–266.
- Neergaard, H. (2005): Networking activities in technology-based entrepreneurial teams, *International Small Business Journal* 23 (3), pp. 257–278.
- Neergaard, H., & Ulhøi, J., P. (2006): Government Agency and Trust in the Formation and Transformation of Interorganizational Entrepreneurial Networks. *Entrepreneurship, Theory & Practice*, July, pp. 519-539.
- Nonaka, I., & Takeuchi, H. (1995): “The Knowledge-Creating Company. How Japanese Companies Create the Dynamics of Innovation.” *Oxford University Press*, New York.
- Osborn, R., N. & Hagedoorn, J. (1997): The Institutionalization and Evolutionary Dynamics of Interorganizational Alliances and Networks. *The Academy of Management Journal*, Vol. 40, No. 2, Special Research Forum on Alliances and Networks (Apr., 1997), pp. 261-278.
- Parker, S., C. (2004): *The Economics of Self-Employment and Entrepreneurship*. Cambridge University Press.
- Parks, C.D. & Hulbert, L.G. (1995): High- and low-trusters’ responses to fear in a pay-off matrix. *Journal of Conflict Resolution*, 38, 718-730.
- Partanen J., Möller, K., Westerlund, M., Rajala, R., Rajala, A. (2008): Social capital in the growth of science-and-technology-based SMEs. *Industrial Marketing Management*, Jul2008, Vol. 37 Issue 5, p513-522,
- Pettigrew, A., M. (1997): What is a Processual Analysis? *Scandinavian Journal of Management*, 13(4): 337-348.
- Powell, W., Koput, K., Smith-Doerr, L.(1996): Interorganizational collaboration and the locus of innovation: Networks of learning in biotechnology, *Administrative Science Quarterly* 41, pp. 116–145.
- Powell, W., W., Smith-Doerr, L. (1994): Networks and economic life. In N.J. Smelser & R.Swedberg (Eds.) *Handbook of economics sociology*, (pp.241-367). Princeton, NJ: Princeton University Press.
- Roman, J. (2005): A Study of Organizational Dialogue: Facing the truth, gaining inspiration and creating understanding of the function of an organization. Helsinki University of Technology Laboratory of Work Psychology and Leadership. Doctoral dissertation series 2005/4 Espoo 2005.
- Ruohotie, P., Koironen, M. (2000): In the pursuit of conative constructs into entrepreneurship education. *Journal of Entrepreneurship Education*, Vol. 3., pp. 9-22.
- Schein, E. (1993). On Dialogue, Culture, and Organizational Learning. *Organizational Dynamics*, Winter 1993, pp. 40-51.

- Schein, E. (1996). Three Cultures of Management: The key to Organizational Learning, *Sloan Management Review*, 38(1), pp. 9–20.
- Schein, E. (1999a). *The Corporate Culture Survival Guide – Sense and nonsense about culture change*. San Fransisco, CA: Jossey-Bass.
- Schein, E. (1999b). *Process Consultation Revisited, Building the Helping Relationship*. Reading, MA: Addison-Wesley.
- Schumpeter, J. A. (1962 (1934)). *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest and the Business Cycle*. Cambridge: Harvard University Press.
- Schumpeter, J., A. (1934): *Theory of Economic Development*, Harvard University Press, Cambridge Mass.
- Senge, P. (1990): *The Fifth Discipline: The Art & Practice of The Learning Organization*. New York: Currency Doubleday.
- Shapiro D., L., Sheppard, B., H., Cheraskin, L. (1992): Business on a handshake. *Negotiation Journal*, 8, 365-377.
- Stähle, P. & Grönroos, M. (1999). *Knowledge Management*. Porvoo :WSOY.
- Stähle, P. (1998). *Supporting a System's Capacity for Self-renewal*, Academic Dissertation for the Faculty of Education at the University of Helsinki.
- Stenholm, P., Pukkinen, T., Heinonen, J. & Kovalainen, A. (2007). *Global Entrepreneurship Monitor 2007 Report, Finland*. Turku School of Economics. Tse Entre Business Research Development Centre. Series B Research Reports B 2/2008.
- Szarka, J. (1990): Networking and Small Firms. *International Small Business Journal*, Vol. 8, pp. 10-22.
- Williamson, O., E. (1985): “The economic institutions of capitalism: Firms, markets, relational contracting.” *Free Press*, New York.
- Williamson, O., E. (1993): Calculativeness, trust and economic organization. *Journal of Law and Economics*, 36(1/2), pp. 453-486.
- Williamson, O., E. (1996): Economic organization: The case for candor. *Academy of Management Review*, 21, pp 48-57.
- Williamson, O., E., Ouchi, K. (1981): The markets and hierarchies and visible hand perspectives. In A. Van de Ven & W.F. Joyce (Eds.). *Perspectives on organization design and behavior*, pp. 347-370. New York: Wiley Interscience.
- Yin, R. (1989): *Case Study Research, Design and Methods*. Beverly Hills, CA: Sage.

SMEs Practice Green and Enhance Profitability (A Case Study)

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Abstract-

The word “green” or “going green” made the number one spot of overused words in 2008 according to Lake Superior State University. Therefore it must be the “in thing” to do for both consumers and business leaders. But make no mistake it is not just yesterday’s thing to do! It is something we must do every year and every day. Why? Because it is not only good for the environment but it can save businesses money on the bottom line and, with the right strategy, it can bring in money on the top line as well.

There are a number of actions that SMEs can take to realize these performance improvements: stop wasting energy, recycling production and office waste, purchase recycled material for production and office, and utilize renewable energy sources. Stop wasting energy. Over 20% of electricity can be cut by turning off unused equipment both on the production floor as well as in the office. Also dialing down heat, air, lighting and air conditioning in unused areas and holidays and weekends. Devices are available to do this automatically. Astute recycling of waste reduces both costs of removal and in most cases can actually bring in income. Purchasing recycled materials in the production process such as paper based materials, plastic resins, recycled metals and lubricating products can save 10-25% on raw materials. Renewable energy sources such as solar panels and purchasing energy from renewable source suppliers save money as well.

The actual projects to implement and sustain these programs will be discussed. The cost benefits will be reviewed. Including the additional business which can be generated through public awareness of your “green” programs and community recognition of your demonstration of social responsibility. Find out how to “go green”- not overused in business.

Introduction/Background

Anderson Packaging has always been committed to quality by meeting and exceeding customer requirements and continuous improvement. Founded in 1967, the Anderson Brothers manufactured packaging machines. They continued to refine and develop the equipment for their customers. They were however, unhappy with how their customers operated the equipment. The quality of the packaging was not up to the standard they thought it should be for the ultimate customer. Therefore in 1968, they began operating the packaging machines themselves in order to

get the most effective packaging output for the final customer- the consumers. There has always been this desire to be “the best”. Continuous improvement efforts and programs have always been the direction and way the Anderson leadership team has focused and led the organization.

Methodology/Application

Today the vision of the company is:

“To be ‘Best in Class’ in Pharmaceutical/ Healthcare contract manufacturing and packaging services. Our culture will be customer focused, embracing regulatory compliance, and continuous improvement. By utilizing operational excellence, state of the art technology, innovation, and training, we will ensure strong growth and profitability.”

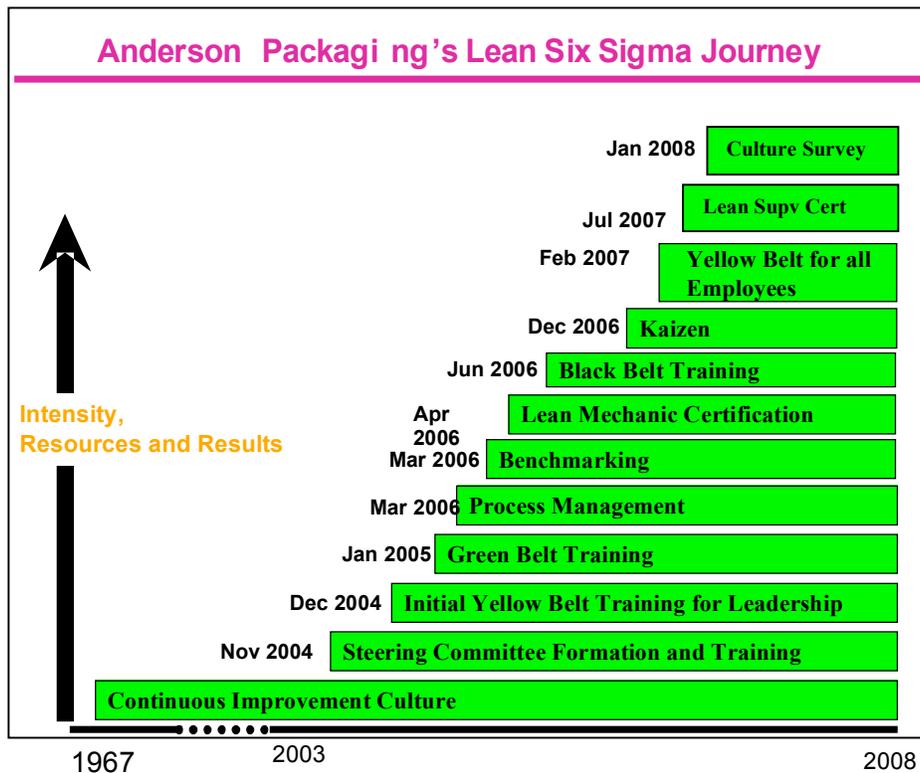
The vision is driven to realization by our daily mantra and mission:

“To provide:

- **Our customers with an on-going competitive advantage.**
- **Our employees with a challenging and rewarding work experience.**
- **And our shareholders with an attractive Return on Investment.”**

We will accomplish this mission by providing innovative manufacturing and packaging services focused on the pharmaceutical and medical device markets. These services will encompass state of the art manufacturing/ packaging equipment and facilities, highly trained cGMP employees, unrivaled customer service levels, and a constant, driving continuous improvement effort.

Table 1: Anderson Packaging's Lean Six Sigma Journey



The Anderson leadership team “discovered” a new formal approach to continuous improvement in 2004. They began a drive to learn the approach of Lean Six Sigma. In that year they hired a Master Black Belt with extensive experience of implementing this approach in numerous Fortune 500 companies and the pharmaceutical and medical device industries. Senior management started their Lean Six Sigma journey by committing themselves to a formal intensive multi-day training program. They started with Lean Manufacturing and then Six Sigma Improvement. This resulted in integrating the two approaches into Lean Six Sigma (LSS) - attacking both the product and process variation and waste.

The strategic plan was developed integrating LSS into both the long-term and an annual business activities and goals with a serious financial and leadership commitment. Middle management all went through a multi-day Yellow Belt Training. Subsequently the first round of

projects and Green Belts were chosen with their five-day training delivered just-in-time as the projects unfolded.

Table 2: Anderson Packaging’s Employee Participation by Skill Set

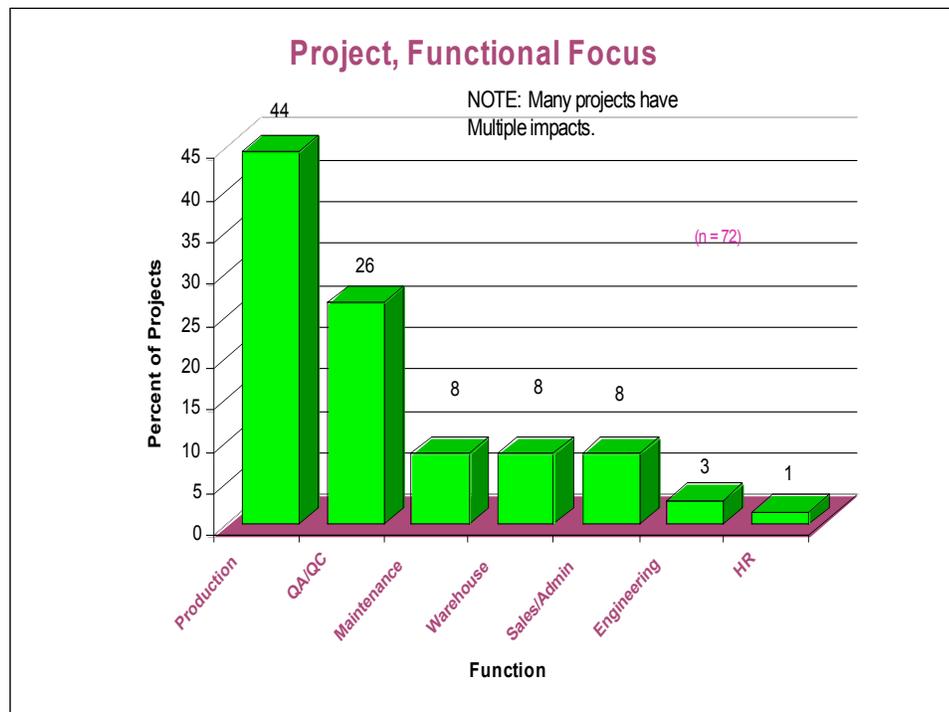
<i>Black Belts</i>	Very complex Improvement Projects	6 (160 hrs training + project)
<i>Green Belts</i>	Complex Improvement Projects	152 (40 hrs training + project)
<i>Certified Lean Mechanics</i>	Set-up/mechanical trouble-shooting, waste removal	34 (24 hrs. training + skill demo)
<i>Kaizen Team Members</i>	Identify and eliminate waste in processes	159 (3 days training + event)
<i>Yellow Belts</i>	Remove waste in daily work	797 (3 hrs. training + skill demo)
<i>Lean Supv. Certification</i>	Shop Floor Lean coaching/mentoring – emphasis in real time	29 (32 hrs. training + skill demo)

Anderson has developed six Green Belts into Black Belts by having them acquire additional training and skills. They lead project teams to solve more difficult and sophisticated problems and implementation actions. In addition they assist in coaching Green Belt teams and deliver LSS

training. Kaizen Events are led by Lean Certified experts and Black Belts. These waste reduction efforts have saved almost \$500K in less than a year of operation.

The Steering Committee has committed to every employee who doesn't already have a "Belt" to be Yellow Belt trained and certified. We are well underway to completing this in 2008. The expectation is that everyone in the organization is either identifying waste and improvement opportunities or eliminating waste and making improvements or both!

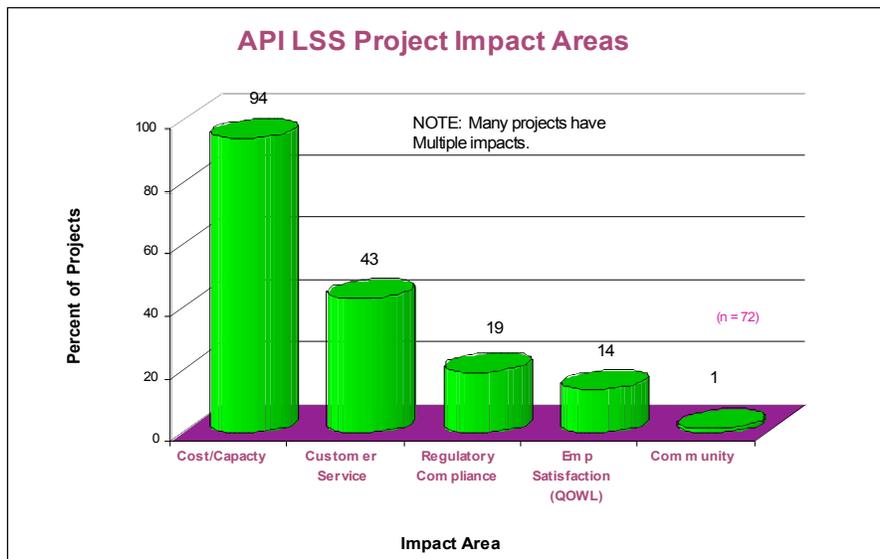
Table 3: Projects, Functional Focus



To that end our projects are focused in every area of the company: 44% Production, 26% Quality Control/ Assurance, 8% Maintenance, 8% Warehouse, 8% Sales/ Administrative/ Finance, 3% Engineering, and 1% Human Resources. There are waste and improvement opportunities in every function or the organization:

The resulting areas of impact likewise are numerous: Cost/ Capacity, Customer Service, Regulatory Compliance, Employee Satisfaction, and Community.

Table 4: Lean Six Sigma Impact Areas



Case: Study

Problem Statement

API consumes considerable amounts of electricity, gas, and water utilities, and incurs cost in direct proportion to consumption.

Project Goal

The team will pursue a 25% cost savings in overall utility usage.

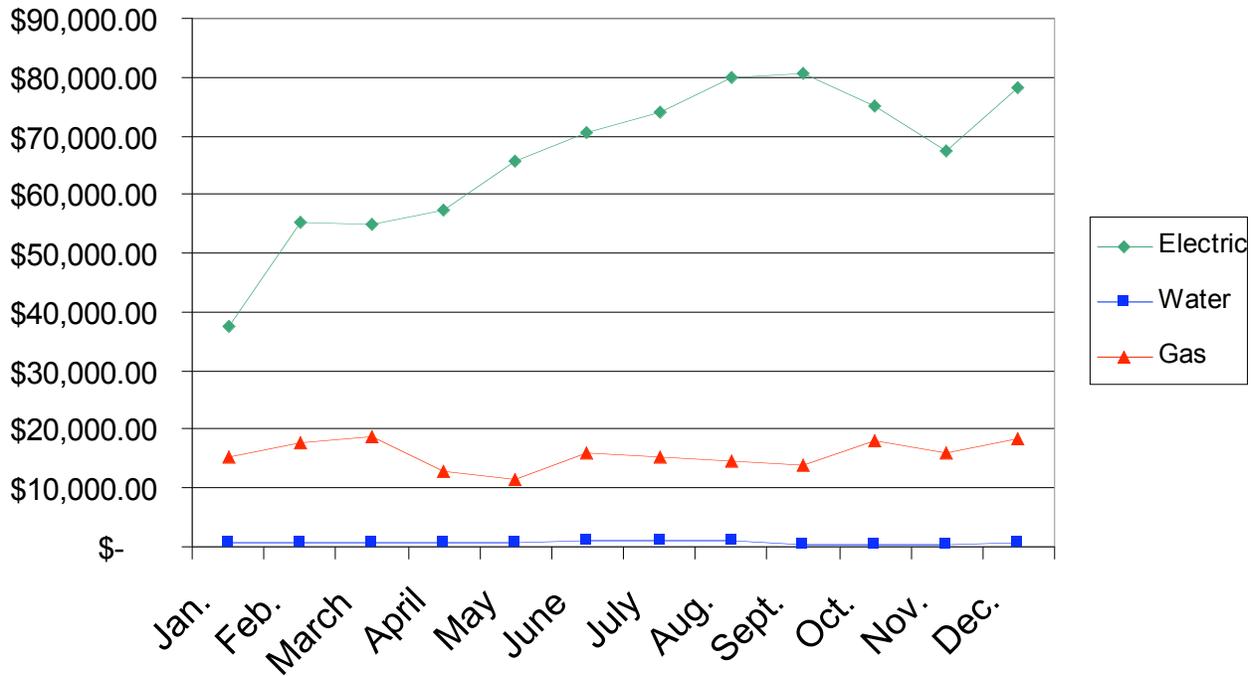
Project Team

- Project Manager - Leader
- Safety Director
- Maintenance Manager
- Facilities Manager
- Operations Supervisor

High Level Process Maps were developed to gain better understanding of the energy usage and specifically where it was consumed.

Table 5: Utility Costs

Utility Cost By Month



Utility costs were analyzed by type and by month in order to target the biggest opportunities.

It was discovered that electric was 81% of the total utility costs, gas was 18% and water was 1%.

Therefore electric was targeted for further analysis. The production floor was found to use 65% of total usage. As a three shift operation, we also discovered that electric is currently billed at two rates: on peak from 8am to 6pm was \$0.06894 per kwh and off peak, 6pm to 8am, was \$0.04138 per kwh.

Further analysis identified the following root causes of our high electricity use:

- No motion sensors
- Outdated lighting systems
- Lights left on when not in use
- No shutdown system in place
- Computers left on when not in use (nights/weekends)

Root cause number one was the lack of a shut down system for weekends. Our solution was to develop a shutdown system and training plan.

The energy cost due to idle packaging lines for 24 hours:

- \$110.12 Blistering line – 14 lines
- \$26.09 Carding line – 11 total lines
- \$24.81 Pouching line – 7 total lines
- \$17.72 Bottling line – 7 total lines
- \$12.89 Cartoning line – 7 total lines

The team initiated a shop floor shut down program. Every Friday night the maintenance department powers down all equipment not in use on that weekend. On Sunday night only machines that will be running on Monday will be powered up. The training was coordinated with the operations, maintenance teams and the training department. These were implemented in January 2009 with an estimated annual cost savings of \$61,700.

Root cause number two was outdated lighting systems. The solution was to install the best and most current lighting system available. This would maximize energy reduction, leverage electric company rebates and take advantage of the Environmental Protection Act of 2005. The 197 fixtures in the office areas and 534 fixtures on the shop floor were upgraded from T12 lighting to T8.119 fixtures in the warehouse were upgraded from Metal Halide to High Output T5 Technology units.

This resulted in a 50% energy savings, longer lamp life, improved illumination and “instant on” capabilities.

The upgraded lighting has a significant impact. We reduced lighting energy consumption by 47% with a total annual savings of \$50,700. We increased lamp life from 20,000 to 30,000 hours and anticipate an electric company rebate of \$30,000. This reduced greenhouse gas emissions equivalent to planting 138 acres of forest annually or taking 111 cars off the road annually. Our simple pay back period was 1.15 years or an ROI of 91%.

Root cause number three was wasted electricity in unoccupied areas and the solution was to install motion sensed lighting. The targeted areas were conference rooms, offices and restrooms. Another solution for wasted electricity is automated PC log off.

Table 6: Computer Electricity Waste

	Use, kWh/year	Cost, \$/year	% After hours
Computers	199,256	\$8,245	73.4%
Monitors	322,136	\$13,330	74.3%
Printers	28,173	\$1,166	64.4%
Totals	549,565	\$22,741	63.4%

Since 63.4% of our computer electric consumption is during non-working hours, \$15,900 can be saved by automatic shut off or behavior change.

Findings and Conclusions

Overall results include implementation of the shop floor shutdown program creating a \$61,724 annual savings and the lighting upgrade which will save an estimated \$50,696 annually.

Installation of motion sensed lighting promises a projected savings of 30% of overall kwh usage and automated PC log off systems would save an additional \$15,900.

So how do we intend to sustain and expand these gains? First all of the replaced light bulbs were recycled. We have a partnership with our corporate “Green Team” to share knowledge and lessons learned across the corporation. Additional Green Belt teams have recently implemented a full recycling program for office waste, including print cartridges, paper, plastic and aluminum as well as machine shop scrap metal and production floor cardboard. Also, significant reduction in hazardous waste for one product via production line improvements and scrap reduction. Also partnerships with our customers have resulted in enhanced recycling for product specific components (i.e. glass and plastics.) It is important to have ongoing updates and communications in the company newsletter to recognize and motivate.

Table 7: LSS Project Results (000)

	API Hard Savings	Capacity/ Avoidance	Customer Savings
2006 Actual	\$ 680	\$1,267	\$248
2007 Actual	\$2,660	\$ 466	\$404
2008 Actual	\$3,258	\$3,314	\$361

These projects and dozens of others like it provide significant financial results that benefit both Anderson and our customers. Anderson had hard savings of \$680K in 2006, \$2.6 M in 2007 with 2008 at \$3.3 M. Soft savings (capacity increase and cost avoidance) of \$1.267 M in 2006, \$5

M in 2007, and 2008 was \$3.3M. Customer savings in 2006 was \$248 K, and 2007 was \$404K. 2008 saved our customers \$0.4M for the year.

Cost Savings, capacity increases, and cost avoidance help Anderson be more competitive and hold down prices. At the same time this allows us to significantly reduce the risk of defects and assure on time customer deliveries. Customer savings typically is directly transferred to customers.

Continuous improvement and waste reduction are added value benefits of trusting Anderson to package your product. These benefits are even greater with the inclusion of “Green” projects in our project portfolio.

Why Did Venture Capital Financing Fail for the Pre Start-up Phase of my Innovative Firm? The View of Portuguese Nascent Entrepreneurs

by José Bilau^a and Eduardo Couto^b

This study identifies the factors from the demand point of view that are responsible for the failure to obtain venture capital during the pre start-up phase of innovative firms. The empirical data comes from a survey administered to 63 Portuguese nascent entrepreneurs who tried to obtain venture capital and were not successful. The main reasons cited for not obtaining venture financing were: 1) small size of the venture capital market in Portugal; 2) limited public policies to support venture capital participation; 3) lack of interest of the venture capitalists in pre start-up phase investments; 4) unwillingness of venture capitalists to provide small amounts of capital. The conclusions of this paper serve as a wake-up call to the policy makers in Portugal to be more aggressive in relation to the public policies giving support to venture capital. It also contains a message for the venture capitalists to pay greater attention to the investment in the pre start-up phase and not to underestimate the financing requests for lower amounts.

Introduction

The characteristics associated with innovative firms, such as high risk and uncertainty, information asymmetries and initial lack of tangible assets, raise additional financing problems for these firms. These problems are especially delicate during the creation and initial phase of the firms and are more keenly felt in countries that have a culture geared towards bank financing. The characteristics of innovative firms make bank financing an unsuitable solution, and venture capital (VC) is the most appropriate method given that the provider of the capital participates fully in the opportunities and risks and, in contrast to the banks, does not look at the issue of collateral, instead undertaking an in-depth analysis of the projects. Therefore, the study of access to VC financing is a crucial issue in the entrepreneurial finance literature. However, in some countries, such as Portugal, informal VC carries little weight, forcing the innovative nascent entrepreneurs to seek formal VC despite it still being a developing market and one where the statistics indicate that there is a certain reluctance to invest during the creation and initial phase of firms.

The previous research into access to VC financing generally opted for an approach from the supply perspective, identifying above all the investment criteria of the Venture Capitalists (VCs) in more advanced phases of the firm and in contexts where the VC is more developed. Several authors have

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highlighted the scarcity of studies on VC which adopt a demand perspective (Mason and Harrison 1999; Brush, Carter, Greene, Hart and Gatewood 2002; Carter, Brush, Greene, Gatewood and Hart 2003; Amatucci and Sohl 2004).

Bozkaya and Potterie (2008) carried out a study that includes identification of the factors that Belgian TBSF entrepreneurs cited to explain the difficulties in obtaining VC financing in the early stage of the firm. In this paper we aim to contribute to deepening the knowledge on this topic concerning the pre start-up phase of the innovative firms, identifying the reasons mentioned by the Portuguese nascent entrepreneurs as responsible for the lack of success in obtaining formal VC. We did so by using a sample of nascent entrepreneurs that were not successful when they tried to obtain formal VC financing (henceforth referred to simply as VC) during the pre start-up phase of their innovative firms. Innovative firms are considered those that base their productive activity on an innovation or advancement in the productive or social environment that result in new products/services or processes, based on the application of knowledge (OECD 2001).

The research questions

Our goal is to contribute to the knowledge about VC financing, analysing the perception of the innovative nascent entrepreneurs concerning the contribution that a wide-ranging set of factors had on the failed attempts to obtain VC financing during the pre start-up phase of their firms.

In particular, the current study examines three central questions:

- (1) How do nascent entrepreneurs rank the importance of different factors when evaluating the reasons for failure to obtain VC financing?
- (2) Does the quality of the business plan, patents or the amount of VC financing requested influence the relative importance of these factors?
- (3) Is there a difference in the evaluation of each of the factors by the subgroups of nascent entrepreneurs, whereby these subgroups resulted from the application of the following criteria: a) quality of the business plan, b) existence of a patent and c) amount of VC requested?

The remainder of our paper is structured as follows. In the next section we briefly review the literature to contextualise the issue of access to VC financing. Section 3 presents a description of how the sample was compiled, the procedures used to obtain the data and the methods. The results of our analysis are presented in section 4. They are discussed in section 5 and the conclusions are outlined in section 6.

Literature

Specificities of the venture capital market in Portugal

Although the activity is growing, the venture capital market in Portugal is still of a small scale. According to the Portuguese Association of Venture Capital and Development (APCRI 2007) at the end of 2005 the funds under management totalled €1158 M and the portfolio at cost €669 K. That year the investment sum reached € 245 M and encompassed 135 firms, while disinvestment in 90 firms reached €176 M. The seed phase (13 investments) and start-up phase (53 investments) accounted respectively for 2 percent and 11 percent of the total investment in 2005. This small size of the VC market in Portugal may be one of the factors that contribute to the failure of the Portuguese nascent entrepreneurs in obtaining VC financing.

In small economies there is a real problem in identifying the venture capitalists in comparison to large economies (EC 2002). In Portugal the first regulation governing the practices of the venture capital industry dates to 1991. However, the activity only received a boost after the changes made to the legislation in 2002. Since then the governmental agencies and the associations have made a big effort to disseminate the venture capital, but as it is a relatively recent option, there may well still be a lack of information about the venture capital activities in Portugal and this can also make it difficult for the nascent entrepreneurs to identify the VCs.

VCs' expectations of rates of return and quick exit

Venture capitalists require higher than expected rates of return for early-stage investments due to the greater risk exposure (Pintado, Lema and Van Auken 2007). Mason and Harrison (1999), Murray and Lott (1995) and Dorf and Byers (2005) mentions rates of return in the 40 percent - 70 percent range for evaluation of investments in the initial phase (seed and start-up stages). The expectations of the VCs as regards the rates of return was cited by the Belgian entrepreneurs of technology-based small firms (TBSF) as the second cause for the difficulties in obtaining VC financing in the early-stage (Bozkaya and Potterie 2008). The high return rates in assessing the potential investment may also explain the rejection of most of the VC financing requests in Portugal.

The VCs do not intend to remain as long-term investors in the firms they help finance (Florida and Martin 1990). Large investors are more willing to supply funds to venture capital firms if they feel that they can later recoup their investment (Jeng and Wells 2000). Therefore, a viable exit mechanism is extremely important for the VCs. In the opinion of the entrepreneurs of technology-based small firms in Belgium the expectations of the VCs in relation to a quick exit was the main reason behind the difficulties in obtaining VC financing in the early-stage of their firms (Bozkaya and Potterie 2008).

In 2005 in Europe the main disinvestment method used was the trade sale (25 percent), while there was also a modest number of IPOs (EVCA 2006). In Portugal the trade sale is also the most common occurrence, with no IPO that year. It is likely that in a country like Portugal with an underdeveloped IPO Market the exit mechanism will be cited as a factor that retracts the investments of the VCs.

Stage of development / amounts of capital and venture capital investments

Although Kaplan and Stromberg (1999, 2001) states that over a third of the VCs' investments in the USA are made when the firms have not yet obtained profits, several studies concluded that the VCs are somewhat reluctant to finance the early-stage of firms (Pellón 1999; Hulsink and Meeusen-Henniger 1999; Jud and Kremshofer 2000) and prefer firms in a more advanced phase (Timmons and Sapienza 1992; Timmons and Bygrave 1997). The financing of the initial phase of firms directly affects the VCs' investment analysis, especially as regards the assessment of the risk and potential return (Carter and Van Auken 1994; Pintado, Lema and Van Auken 2007).

The statistical data on Europe (EVCA 2006) backs up this analysis and shows that the amount of VC Investments in the expansion phase is substantially greater than in the seed and start-up stages. While in 2005 in Europe the seed and start-up phases represented 26.5 percent of the investment made by the VCs, in Portugal the percentage was around half this figure (13 percent) which leads us to surmise that the relative lack of interest of VCs in investing in firms that are in an initial phase may be found to be one of the reasons cited by the Portuguese nascent entrepreneurs for the rejection of their proposals by the VCs.

The size of the investment may also hinder the obtaining of the VC financing. Small investments are ignored by some venture capitalists (Timmons and Sapienza 1992). The preferred targets of the VCs are businesses that need a relatively high investment sum. Dorf and Byers (2005) states that in the USA only investments over 1 million USD are of interest to the VCs. The fixed costs of the due diligence that is carried out to protect the interests of the VCs and their shareholders prevent low value investments. In Europe, Bozkaya and Potterie (2008) surveyed Belgian entrepreneurs of technology-based small firms who had difficulty in obtaining VC financing in the early-stage of their firms and concluded that one of the factors pointed out by the entrepreneurs for their failure was the lack of interest of the VCs to provide small amounts of capital.

Technological support and business planning

The entrepreneurial initiatives can also be differentiated according to the technology they use,

which can stimulate the interest of the investors. According to Shane and Stuart (2002) the exclusivity licences or patents can be important resources for the success of the firm, and Teece (1986) even goes so far as to say that in some situations they are the major resource of a firm in the start-up phase. The literature points out a positive relationship between the existence of patents and the future increase in the value of the firms (Hall and Trajtenberg 2005), which makes them attractive for VCs. Venture capital operators give precedence to investment in firms that possess exclusive singular and valuable new technology (Poser 2003). As a consequence it is possible that the lack of patents may hinder access to investment supplied by the VCs.

The business plan enables the nascent entrepreneurs to translate their idea into a business. Before all else, the business plan is the calling card of the entrepreneur to present the idea of the business to all entities related to it. It is an important aspect to analyse the technical, economic and financial viability of the initiative. Through the financial forecasts included in the business plan the entrepreneur can estimate the funding needed and the dates it has to be obtained.

Berger and Udell (1998) and Delmar and Shane (2003) refer to the importance of the business plan to obtain external finance. The business plan is also essential to attract VC financing, and its preparation is a crucial task in the process to obtain venture capital financing. The information it contains referring to the entrepreneurial initiative and the entrepreneur / team make it a basic tool for the decision concerning the financial participation by the VCs (MacMillan, Siegel and Narasimha 1985; MacMillan and Narasimha 1987; Rhea 1989; Tyebjee and Bruno 1986). Pintado and Lema (2004) conclude that the business plan is analysed meticulously by the VCs, who demand that it be shown by the firm's entrepreneurs prior to the start of negotiations (due diligence).

The perception by the nascent entrepreneur that the business plan is especially important in the process to obtain VC financing can lead the nascent entrepreneurs to cite the poor quality or defective presentation of the business plan as one of the reasons for rejection of capital by the VCs.

Characteristics of the nascent entrepreneur

The curriculum of the entrepreneur and the team members who will work with him is one of the selection criterion for investment that is most mentioned in the literature on venture capital (Franke, Gruber, Harhoff and Henkel 2008). The VCs especially value industry experience, start-up experience and management experience (Tyebjee and Bruno 1984; MacMillan, Siegel and Narasimha 1985; MacMillan and Narasimha 1987; Bruno and Tyebjee 1985; Gorman and Sahlman 1989; Fried, Hisrich, and Polonchek 1993; Rah, Jung and Lee 1994; Fried and Hisrich 1994; Zacharakis and Myer 1995; Muzyka, Birley and Lelux 1996; Wright, Robbie and Ennew 1997). The self-assessment may lead the nascent entrepreneurs to conclude that one of the reasons for investment refusal by the VCs is linked to the assessment of the capacities of both themselves and their team.

Studies on VCs place an emphasis on the role of active investors through monitoring (Kaplan and Stromberg 2001) which consumes a lot of time and significantly reduces the entrepreneur decision-making and control (Denis 2004). Poutziouris, Chittenden and Michaelas (1998), in a study carried out in the UK concluded that in the small firms there is a natural control aversion. Although later studies refer that there is less aversion from the NTBF owner-managers when compared to proprietors of small firms (Berggren, Oloffson and Silver 2000; Hogan and Hutson 2005) it is possible that the strong feeling of possession that is present in the creation phase of the firm may lead the nascent entrepreneur to raise objections as regards yielding part of the control to the VCs. Control aversion can be viewed by the nascent entrepreneurs as one of the reasons for refusal of investment by the VCs.

Knowledge and capacities of the venture capitalists

The VCs generally include staff in their workforce with high qualifications (for example MBAs) who may understand the different kinds of business but who may find it difficult to understand the

technology that is presented to them. This is especially true when having to deal with more innovative projects, given that true innovation involves complex technology (some of which may be groundbreaking). Small-scale VCs specialise in different industries or segments of industries that they know well and do not always have the capacity to assess projects based on truly groundbreaking technology. This lack of technological understanding and the lack of specific knowledge and skills of the venture capitalists may also be seen by the nascent entrepreneurs as a factor that contributes to the rejection of the investment by the VCs.

Public policies giving incentives to venture capital financing

The development of innovative firms, important actors in the innovation system, is a necessary prerequisite of a healthy economy. These firms are the initial driving forces that bring about the advancement of technology and the dissemination of the innovations and new technology also in the traditional sectors. It is consensual that the return on innovation surpasses the private gain for society. Certain problems rooted in “market failures”, such as poor provision of finance, seem to impair the functioning of the innovation system in Europe (EC 2002).

Acknowledgement of the significant return for society in tandem with some dysfunctions not only justify public intervention but actually call for aggressive policies in order to make sure the innovation system gives its best contribution to the economic and social development. Hence, different policies, including those that encourage the VC financing, are needed to make it easy to facilitate and stimulate the development of innovative firms. In the case of VC, there is a wide array of public policies. Clarification of the legal framework regulating the activity, attribution of tax benefits and direct government funding are perhaps some of the most well-known government schemes (Jeng and Wells 2000). Whether or not these government schemes are in place can be a factor that pushes forward or inhibits the investment of the VCs. The Portuguese nascent entrepreneurs may also link their failure to obtain VC on poorly implemented or simple lack of government schemes such as these.

Methodology

Sample

Our study used a sample of nascent entrepreneurs (a person who is now trying to start a new business) and involved two phases. The first identified a set of nascent entrepreneurs who were currently attempting to create an innovative firm. These nascent entrepreneurs were then monitored for a period of time (26 months) at the end of which they answered a follow-up questionnaire to ascertain the results of their efforts to obtain venture capital on the date the firm was created^c. The initial sample we used in this study consisted of 476 nascent entrepreneurs (individuals and teams) who entered three innovative business ideas contests that took place in Portugal in the 2nd and 3rd quarters of 2004, organised by government entities under the aegis of the Ministry of the Economy. Out of the 141 answers obtained, 61 were excluded because the nascent entrepreneur stated that he had not attempted to obtain venture capital, returned incomplete answers or there were doubts about the innovative nature of the firm, 17 were excluded because the nascent entrepreneur stated that he had obtained venture capital, meaning that the final sample was reduced to 63 nascent entrepreneurs who attempted and did not manage to obtain venture capital, which translates into 13.24 percent of the initial sample.

Questionnaire and methods

The first section of the questionnaire collected information about the characteristics of the nascent

^c The association between the start-up of the firm and the first sale has been consistently used in the literature (Gatewood, Shaver and Gartner 1995; Carter, Gartner and Reynolds 1996; Newbert 2005), so we also used these criteria in this study.

entrepreneur and the business initiative. These questions included (0) “kind of innovation proposed” so as to ascertain that the firm was indeed innovative; (1) “Description of the planning carried out” in order to evaluate the quality of the business plan (strong/few); (2) Whether or not a patent existed; (3) Amount of VC requested.

In the second section of the questionnaire the nascent entrepreneurs were asked to assess the relative importance of 13 criteria that were identified in previous research. This section was based on Bozkaya, Romain and Van Pottelsberghe (2003) previous model used to survey non-listed Belgian technology-based firms in 2002/2003.

The 13 variables that make up the second section were measured using a five-point Likert scale: 5 was “extremely important”, 4 was “very important”, 3 was “mildly important”, 2 was “not very important” and 1 was “unimportant”.

Questions included (1) lack of VCs’ interest in pre start-up phase investments; (2) unwillingness of VCs to provide small amounts of capital; (3) lack of understanding of the specific technology presented by many VCs; (4) lack of registered patents; (5) poor or defective quality of the presentation of the business plan; (6) lack of entrepreneurial and managerial skills of the nascent entrepreneur and/or the management team; (7) Concerns over loss of control in the firm to be created; (8) VCs’ expectations about rates of return; (9) VCs’ expectations about the chances of quick exit; (10) lack of information about the VC activities in Portugal; (11) lack of VCs specific knowledge and skills; (12) limited public policies to support VC participation; (13) small size of the VC financing market in Portugal.

The data were initially summarised using univariate statistics. The sample was subsequently segmented according to three criteria: a) quality of the business plan (strong/few) b) existence of a patent (yes/no) c) amount of VC requested: high($\geq \text{€}1000000$)/low ($<\text{€}1000000$). The nonparametric Mann-Whitney U-Test was used to identify differences between the categories relative to the three criteria.

Results

Table 1 shows the univariate statistics obtained both for the sample ($N = 63$) and the sub-samples that resulted from the application of the following criteria: a) quality of the business plan b) existence of a patent c) amount of VC financing requested. Table 1 also includes the results of the nonparametric Mann-Whitney U-test of differences between means, which was used to identify differences between the categories relative to the three criteria.

The scores obtained in the sample (column 1) suggest that the small size of the venture capital market is considered the major factor by the nascent entrepreneurs behind the failure to obtain VC financing in Portugal. The second factor was considered the limited public policies to support venture capital participation. Other important factors are the lack of VCs’ interest in pre start-up phase investments and the unwillingness of VCs to provide small amounts of capital. The aspects linked to the characteristics of the nascent entrepreneur (entrepreneurial and managerial skills and control aversion) that were also assessed are considered the factors that least contributed to rejection of the proposals by the VCs.

Column 2 of Table 1 splits the initial sample according to the “quality of the business plan” criterion. While the nascent entrepreneurs who put a big emphasis on the planning stated that failure to attract VC was due to the lack of interest by the Venture Capitalists in investing in pre start-up phase and in small investments, in contrast the nascent entrepreneurs who attached less importance to planning pointed to the public policies with regard to support venture capital participation and the small size of the VC market in Portugal as the main justifications for their failure to obtain VC financing. We found statistically significant differences ($p \leq 0.05$) in relation to these last two variables that are considered especially relevant for those who backed up their proposals on incomplete or poorly prepared business plans. Also in the “lack of registered patents” the probability value (p) is less than or equal to 0.10, and it is the nascent entrepreneurs who put a big

emphasis on planning who most believed that the lack of patents significantly contributed to the rejection of their proposals.

When the sample is divided into the nascent entrepreneurs with businesses backed up by patents and those that are not backed up by patents (column 3 of Table 1) the most important factors for failure do not change. Both the subgroups refer in the first place to the small size of the venture capital market in Portugal, followed by limited public policies to support venture capital participation. The variables where there are statistically significant differences are those referring to the poor quality or presentation of the business plan ($p \leq 0.05$) and the lack of entrepreneurial and managerial skills of the nascent entrepreneur and/or the management team ($p \leq 0.10$). More importance is attached to these two factors by the nascent entrepreneurs whose business is backed up by patents than by the subgroup of nascent entrepreneurs whose business does not have a patent. Finally, when the criterion for the subdivision of the sample is the amount of venture capital requested (column 4 of Table 1) we see that the nascent entrepreneurs who asked for higher amounts said it was the lack of VCs' interest in pre start-up phase investments, the small size of the VC market in Portugal and the lack of understanding by the venture capitalists of the technology presented which were the factors that they believe are behind the failure to obtain VC, while those who requested a VC sum less than € 1000000 pointed out the importance of the second factor, and added the limited public policies to support venture capital participation as a factor behind the failure. Among these two subgroups there are three variables with statistically significant differences: lack of VCs' interest in pre start-up phase investments and the lack of understanding by the venture capitalists with regard to the technology presented, both with $p \leq 0.05$ and which are most valued by those who request higher investment sums and the lack of entrepreneurial and managerial skills of the nascent entrepreneur and/or the management team ($p \leq 0.10$), which is more valued by those who tried to obtain VC financing less than € 1000000.

Discussion

In this study the nascent entrepreneurs who failed to obtain VC financing during the pre start-up phase of the innovative firms assessed the contribution of different factors explaining this fact. A first set of factors that was assessed is related to the specificities of the Portuguese venture capital market (size, dissemination, opportunities for a quick exit and public policies). The results obtained as regards this first set of factors show that there is a perception that the small size of the venture capital market and the limited public policies to support VC participation can make a crucial contribution to the VCs' decision. When we subdivide the sample according to the "quality of the business plan" criterion, it emerges that the subgroup that gave more emphasis to producing a complete business plan attaches less importance to these two factors than those who spend less time on the business planning. This leads us to surmise that suitable planning of the business would have made it easier for this subgroup to gain access to the VCs, attenuating the idea that the small size of the venture capital market and the improper public policies are to blame for failing to attract venture capital. Despite the fact the VC industry is relatively recent in Portugal, the people surveyed did not raise questions regarding the information available about this kind of financing. The VCs' expectations of a quick exit is only viewed as an important factor by the nascent entrepreneurs who make up the subgroups of the sample that gave more emphasis to the planning or who wanted higher sums of VC financing.

These results are similar to those obtained by Bozkaya and Potterie (2008) as regards the question of information about the venture capital market. The results obtained in both studies devalued its importance. With regard to assessing the public policies to support venture capital participation the two studies brought to the fore their importance although the results of our study provide more conclusive findings. Given that Belgium and Portugal are EU countries this concern has reached the EU authorities and today it is evident that they are concerned about this problem. The expectations of a quick exit factor does not, in our study, match the importance that it did in Bozkaya and

Potterie (2008) study where it is considered the most important condition as regards influencing access to VC financing in the early-stage. This comparison and the following ones have their limitations, as in Bozkaya and Potterie (2008) study the underlying question was “VC financing for my high-tech start-up firm has difficulties because of:” whereas in this study the nascent entrepreneurs were asked to assess the relative importance of 13 factors behind the failure to obtain VC financing in the pre start-up phase.

A second set of factors that was assessed is related to the venture capitalists. The contribution for the failure of their expectations about rate of return, their lack of interest in low investments in pre start-up phase, the understanding of the technology presented and their specific knowledge and skills were also assessed by the nascent entrepreneurs. The results obtained match the previous research that points out the interest of the VCs in investing in firms at a more advanced phase. In effect, there seems to be a conviction among the surveyed sample that the pre start-up phase of the firm is not the preferred phase of VCs to channel their investment (3rd most mentioned factor in the sample). This conviction is even stronger in the subgroups that put emphasis on producing high-quality business plans or who try to obtain higher amounts of VC financing – in both subgroups it was mentioned as the major factor. These two subgroups, together with the subgroup that intended to create firms backed up by a patent seem to doubt the technological knowledge of the VCs who turned down their requests for financing despite not bringing their specific knowledge and skills into doubt. Surprisingly, the VCs’ expectations about rates of return, one of the VCs’ selection criteria most referred to in the literature, was not viewed as an important factor by the nascent entrepreneurs surveyed. The nascent entrepreneurs also believe that the VCs may take a dim view of proposals that request low venture capital amounts. To sum up, the results of this second set of factors seem to indicate that there is a belief, especially among the nascent entrepreneurs with high-quality business plans or with business backed up by patent, that the VCs are not overly concerned about the forecast rates of returns, but they do not fully understand the technology, have minimum investment benchmark amounts and are afraid to invest in firms in a pre start-up phase. These results differ from those obtained by Bozkaya and Potterie (2008) in relation to the VCs’ expectations of rates of return and lack of understanding of specific technology by many VCs, which concluded that for the Belgian TBSFs the first factor is the second most important cause behind the difficulties in gaining access to the VC financing in the early-stage and the second factor is not even considered among the most important. The results are partially identical in relation to the lack of VCs interest in early-stage investments and lack of VC executives’ specific knowledge and skills. The unwillingness of VCs to invest smaller sums was mentioned in both the studies, and in Portugal there is a subgroup that considers that the VCs pay particular attention to this factor in the final decision: the nascent entrepreneurs who place emphasis on producing a high-quality business plan (2nd most important factor). Has the business process with this subgroup evolved to the point that it has clearly become a question of the minimum amounts for investment of the VCs?

A third group of factors is related to the characteristics of the nascent entrepreneur or the management team (willingness to yield part of the control and entrepreneurial / managerial skills) and the business initiative (existence of a patent and quality of the business plan). With regard to the characteristics of the nascent entrepreneurs, the results show, as in the study by Bozkaya and Potterie (2008), that the surveyed nascent entrepreneurs do not believe these characteristics were important factors behind the rejection of their proposals by the VCs. We surmise that the commonly mentioned control aversion of small business entrepreneurs, much talked about in the literature, is not especially noticeable among the nascent entrepreneurs behind innovative business ideas, confirming the results of previous studies by Berggren, Oloffson and Silver (2000) and Hogan and Hutson (2005). Despite the positive self-assessment of the entrepreneurial and managerial skills we ascertained the existence of subgroups (business initiatives with a patent or when the venture capital investment sum requested was small) who, in contrast to their respective counterparts, considered that this factor could have a bearing on the decision of the VCs.

Finally, the results referring to the characteristics of the business initiative showed that the lack of a patent is not considered by the sample as a decisive factor behind the failure to obtain VC financing, but it is one of the factors that results in differences in opinion in the subgroups established based on the “quality of the business plan” criterion, whereby the entrepreneurs that put more emphasis on the business plan attached more importance to this factor. Most of the nascent entrepreneurs do not associate possible faults in the business plan with the rejection of their proposals by the VCs, but the subgroup of business initiatives with a patent stand apart from the subgroup with no patent as regards the importance attached to this factor.

Conclusions

This paper has been an attempt to investigate the reasons underlying the lack of success in obtaining the VC financing. We did so from the demand perspective using a sample of nascent entrepreneurs that were not successful when, during the pre start-up phase of their innovative firms, they attempted to obtain VC financing. This approach has rarely been taken in previous research which usually opted for the supply perspective and focused on more advanced phases of the firm, which are recognised to be of more interest to the VCs. We also split up the initial sample according to three criteria: a) quality of the business plan b) existence of a patent c) amount of VC financing requested, so as to enable a more refined analysis and identification of the factors that differentiate the two subgroups resulting from the application of each of the criteria.

The findings enable us to draw the conclusion that the Portuguese nascent entrepreneurs believe the structural aspects of the Portuguese venture capital market should be attributed a significant share of the blame for the lack of success. The main reasons cited for not obtaining venture capital financing were: 1) small size of the VC market in Portugal; 2) limited public policies to support VC participation; 3) lack of interest of the VCs in pre start-up phase investments; 4) unwillingness of VC suppliers to provide small amounts of capital. The sub-samples showed that the nascent entrepreneurs that based their financing proposals on more complete business plans or who requested VC financing over € 1000000 included at the top of their list “lack of interest of the VC suppliers in pre start-up phase investments”. Small size of the VC market in Portugal is a reason mentioned by the nascent entrepreneurs whose business is backed up by a patent. The factors that most differentiate the nascent entrepreneurs who put emphasis on a high-quality business plan and those who did not make the business plan a high priority are the importance given to the public policies to support VC participation and the influence of the small size of the venture capital market in Portugal, both of which are attributed importance by the second subgroup. When the sample is split into the nascent entrepreneurs with businesses backed up by a patent / not backed up by a patent the variable with statistically significant differences is the one referring to the low quality or poor presentation of the business plan, which is attributed more importance by the nascent entrepreneurs with patents. The lack of interest by venture capitalists in investing in the pre start-up phase and the lack of understanding by the venture capitalists of the technology presented are factors that lead to differences in the subgroups created based on the amount of VC financing requested. More importance is attached to these factors by entrepreneurs who requested higher investment amounts than those who tried to obtain less than € 1000000 of VC financing.

We believe that these results can contribute to understanding the role played by the different factors in the process to obtain VC financing during the pre start-up phase of innovative firms. The conclusions of this paper serve as a wake-up call to the policy makers in Portugal to be more aggressive in relation to the public policies giving support to venture capital. It also contains a message for the venture capital operators to pay greater attention to the investment in the pre start-up phase and not to underestimate the financing requests asking for a lower amount.

However, as with all research, there are several limitations. We now outline some of these limitations as well as the possible avenues of future research. The results obtained refer specifically to a given context (Portugal). To ascertain whether our conclusions can be generalised to other

contexts further research is necessary in other countries to validate our results. The sample comprises nascent entrepreneurs identified from contests held for innovative business ideas. In future research, an effort can be made to identify a random sample of innovative nascent entrepreneurs. Our analysis focused only on formal VC financing. In future studies this analysis can also look at informal venture capital or compare the different kinds of VC. Issues related to gaining access to venture capital, which have huge and wide-ranging potential for research and where it is not easy to obtain suitably large samples, can be explored through qualitative methods such as case studies. This alternative approach can be useful to assess the influence of other factors (for example characteristics of the business) or to focus specifically on some of the stages of the process to obtain venture capital financing.

References

- Amatucci, F. M. and Sohl, E. J. (2004). "Women Entrepreneurs Securing Business Angel Financing: Tales From the Field," *Venture Capital*, 6 (2-3)181-196.
- APCRI (2007). "Anuario da APCRI 2006/2007," < <http://www.apcri.pt/node/>>. Accessed on Jan.5, 2009.
- Berger, A., and Udell, G.F. (1998). "The Economics of Small Business Finance: The Roles of Private Equity and Debt Markets in the Financial Growth Cycle," *Journal of Banking and Finance*, 22, 613-673.
- Berggren, B., Oloffson, C. and Silver, L. (2000). "Control Aversion and Search for External Financing in Swedish SMEs," *Small Business Economics*, 15 (3), 233-242.
- Bozkaya, A. and Van Pottelsberghe De La Potterie, B. (2008). "Who Funds Technology-Based Small Firms? Evidence from Belgium," *Economics of Innovation and New Technology*, 17, (1&2), 2008, 97 - 122.
- Bozkaya, A., Romain, A. and Bruno Van Pottelsberghe (2003). "Surveying Technology-Based Small Firms: A perspective from Belgium," Working Papers_CEB 04-020.RS, Université Libre de Bruxelles, Solvay Business School, Centre Emile Bernheim (CEB).
- Bruno, A.V. and Tyebjee, T.T. (1985). "The Entrepreneur's Search for Capital," *Journal of Business Venturing*, 1 (1), 61-74.
- Brush, G., Carter, N.M., Greene, P. G., Hart, M.M. and Gatewood, E. (2002). "The Role of Social Capital and Gender in Linking Financial Suppliers and Entrepreneurial Firms: Framework for Future Research," *Venture Capital*, 4 (4), 305-323.
- Carter, N.M., Brush, C.G., Greene, P.G., Gatewood, E. and Hart, M.M. (2003). "Women Entrepreneurs who Break Through to Equity Financing: The Influence of Human, Social and Financial Capital," *Venture Capital*, 5 (1), 1-28.
- Carter, N.M., Gartner, B. and Reynolds, P. (1996). "Exploring Start-up Event Sequences," *Journal of Business Venturing*, 11(3), 156 -166.
- Carter, R., and Van Auken, H. (1994). "Venture Capital Firms Preferences for Projects in Particular Stages of Development," *Journal of Small Business Management*, 32 (1), 60-74.
- Delmar, F. and Shane, S. (2003). "Does Business Planning Facilitate the Development of New Ventures?" *Strategic Management Journal*, 24, 1165-1185.
- Denis, D. J. (2004). "Entrepreneurial Finance: An Overview of the Issues and Evidence," *Journal of Corporate Finance*, 10, 301-326.
- Dorf, R.C. and Byers, T. H. (2005). *Technology Ventures: From Idea to Enterprise*. New York: McGraw-Hill.
- EC - European Commission (2002). "Observatory of European SMEs, N°6," < ec.europa.eu/enterprise/enterprise_policy/analysis/doc/smes_observatory_2003_report6_en.pdf >. Accessed on Jan.8, 2009.
- EVCA Barometer (2006). "EVCA Barometer June / 2006," < euproject.vces.com/uploads/media/tmpl_27_art_43_att_1000.pdf >. Accessed on Jan.12, 2009.

- Florida, R. and Martin, K., (1990). *The Breakthrough Illusion: Corporate America's Failure to Move from Innovation to Mass Production*. New York: BasicBooks.
- Franke, N.; Gruber, M. Dietmar Harhoff, M. and Henkel, J. (2008). "Venture Capitalists' Evaluations of Start-Up Teams: Trade-Offs, Knock-Out Criteria, and the Impact of VC Experience," *Entrepreneurship Theory and Practice*, 32 (3), 459-483.
- Fried, V. H., Hisrich, R.D. and Polonchek, A. (1993). "Research Note: Venture Capitalists' Investment Criteria: A Replication," *Journal of Small Business Finance*, 3, 37-42.
- Fried, V.H. and Hisrich, R.D. (1994). "Towards a Model of Venture Capital Investment Decision Making," *Financial Management*, 23 (3), 28-37.
- Gatewood, E.J., Shaver, K.G. and Gartner, W.B. (1995). "A Longitudinal Study of Cognitive Factors Influencing Start-up Behaviors and Success at Venture Creation," *Journal of Business Venturing*, 10 (5), 371-391.
- Gorman, M. and Sahman, W.A. (1989). "What do Venture Capitalists Do?" *Journal of Business Venturing*, 4 (4), 231-248.
- Hall, B., Jaffe, A. and Trajtenberg, M. (2005). "Market Value and Patent Citations," *RAND Journal of Economics*, 36, 16-38.
- Hogan, T. and Hutson, E. (2005). "What Factors Determine the Use of Venture Capital? Evidence From the Irish Software Sector," *Venture Capital*, 7 (3), 259-283.
- Hulsink, W., B. Van Der Meer and E. Meeusen-Henniger (1999). "High Tech Entrepreneurship in the Low Countries?" Erasmus Universiteit Rotterdam.
- Jeng, L.A. and Wells, P.C. (2000). "The Determinants of VC Funding: Evidence Across Countries," *Journal of Corporate Finance*, 6 (3), 241-289.
- Jud A. and Kremshofer. T. (2000). *Der Österreichische Beteiligungsmarkt, study by. Joanneum Research*. The Austrian Venture Capital Market. Vienna.
- Kaplan, S. and Stromberg, P. (1999). "Financial Contracting Meets the Real World: An Empirical Analysis of Venture Capital Contracts," Working Paper, University of Chicago, Chicago, IL.
- Kaplan, S. and Stromberg, P. (2001). "Venture Capitalists as Principals: Contracting, Screening, and Monitoring," *American Economic Review*, 91, 426-430.
- MacMillan, I.C. and Narasimha, P.N.S. (1987). "Characteristics Distinguishing From Unfunded Business Firms Evaluated by Venture Capitalist," *Strategic Management Journal*, 8, 579-585.
- MacMillan, I.C., Siegel, R. and Narasimha, P.N.S. (1985). "Criteria Used by Venture Capitalists to Evaluate New Ventures Proposals," *Journal of Business Venturing*, 1 (1), 119-128.
- Mason, C.M. and Harrison, R.T. (1999). "Venture Capital: Rationale Aims and Scope," *Venture Capital*, 1, 1-46.
- Murray, G. C. and Lott, J. (1995). "Have UK Venture Capitalists a Bias Against Investment in New Technology-Based Firms?" *Research Policy*, 24, 283-299.
- Muzyka, D., Birley, S. and Lelux, B. (1996). "Trade-offs in the Investment Decisions of European Venture Capitalists," *Journal of Business Venturing*, 11 (4), 273-287.
- Newbert, S.L. (2005). "New Firm Formation: A Dynamic Capability Perspective," *Journal Small Business Management*, 43 (1), 55-77.
- Pellón, J. M. (1999). "Financiación de la Innovación con Capital Riesgo," *Papeles de Economía Española*, nº 81, 1999, 196-210.
- Pintado, T. R.; Lema, D.G.P. and Van Auken H. V. (2007). "Venture Capital in Spain by Stage of Development," *Journal of Small Business Management*, 45 (1), 68-88.
- Pintado, T.R. and Lema, D.G.P. (2004). "El Plano de Negocio en la Toma de Decisiones del Capital Riesgo en España," *Harvard Deusto (Finanzas & Contabilidad)*, 58, 60-66.
- Poser, T. (2003). *The Impact of Corporate Venture Capital: Potentials of Competitive Advantage for the Investing Company*. Glaber Edition Wissenschaft. Deutscher Universitäts-Verlag.
- Poutziouris, P., Chittenden, F., and Michaelas, N. (1998). *The Financial Affairs of Private Companies*. Liverpool: Tilney Fund Management.

- Rah, J., Jung, K. and Lee, J. (1994). "Validation of the Venture Evaluation Model in Korea," *Journal of Business Venturing*, 9 (6), 509-524.
- Rhea, R.H. (1989). "Factors Affecting Success and Failure of Seed/Start-up Negotiations," *Journal of Business Venturing*, 4 (2), 149-158.
- Shane, S. and Stuart, T. (2002). "Organizational Endowments and the Performance of University Start-ups," *Management Science*, 48 (1), 154-170.
- Teece, D.J.(1986). "Profiting Form Technological Innovation: Implications for Integration, Collaboration, Licensing and Public Policy," *Research Policy*, 15, 285-305.
- Timmons , J.A. and Sapienza, H.J. (1992). "Venture Capital: The Decade Ahead," in D.L. Sexton and Kasarda, J.S. (eds) *The State of the Art of Entrepreneurship*, Boston: PWS-Kent, 402-437.
- Timmons, J. A. and Bygrave, W. D. 1997. "Venture Capital: Reflections and Projections," in Sexton, D. L. & Smilor, R. (Eds.), *Entrepreneurship 2000*. Chicago: Upstart Publishing Co, 29-46.
- Tyebjee, T.T. and Bruno, A.V. (1984). "A Model of Venture Capitalist Investment Activity," *Management Science*, 30, 1051-1066.
- Tyebjee, T.T. and Bruno, A.V. (1986). "Negotiating of Venture Capital Financing," *California Management Review*, 29, 45-59.
- Wright, M., Robbie, K. and Ennew, C. (1997). "Venture Capitalists and Serial Entrepreneurs," *Journal of Business Venturing*, 12 (3), 227-249.
- Zacharakis, A.L. and Myer, G.D. (1995). "The Venture Capital Decision: Understanding Process Versus Outcome," in Bygrave, W.D., Bird, B.J., Birley, S., Churchill, N.C., Hay, M., Keeley, R.H. and Wetzel, W.E. (eds). *Frontiers of Entrepreneurships Research 1995*. Wellesley, MA: Babson College, 465-478.

Table 1
Factors Behind the Failure to Obtain VC Financing in the Pre Start-up Phase: Mean and Standard Deviation
and Mann-Whitney Test of Differences Between Means by Categories

Var	All N.E.		Quality of B.P.				Existence of a Patent				Amount of VC Requested			
	Mean	S.D.	Strong		Few		Yes		Non		High		Low	
			Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
VAR1	3.6667	1.40276	3.9000	1.20961	3.5581	1.48488	3.6111	1.46082	3.6889	1.39516	4.4167(**)	0.99620	3.4902(**)	1.43349
VAR2	3.4127	1.43274	3.7000	1.38031	3.2791	1.45284	3.3889	1.50054	3.4222	1.42205	3.2500	1.65831	3.4510	1.39016
VAR3	3.3810	1.49654	3.5500	1.43178	3.3023	1.53584	3.8333	1.42457	3.2000	1.50151	4.2500(**)	1.21543	3.1765(**)	1.49273
VAR4	2.7778	1.51811	3.3000(*)	1.65752	2.5349(*)	1.40321	2.3889	1.53925	2.9333	1.49848	3.2500	1.65831	2.6667	1.47874
VAR5	2.8254	1.28941	2.7000	1.38031	2.8837	1.25754	3.4444(**)	1.24722	2.5778(**)	1.23378	2.8333	1.33712	2.8235	1.29160
VAR6	2.1746	1.05555	2.0500	0.99868	2.2326	1.08753	2.6111(*)	1.33456	2.0000(*)	0.87905	1.6667(*)	0.77850	2.2941(*)	1.08248
VAR7	2.1270	1.12869	1.9500	1.19097	2.2093	1.10320	1.8333	0.92355	2.2444	1.19003	2.0833	1.50504	2.1373	1.03961
VAR8	3.2063	1.28463	3.2000	1.15166	3.2093	1.35503	3.3333	1.23669	3.1556	1.31349	3.1667	1.19342	3.2157	1.31626
VAR9	3.2222	1.17012	3.5500	0.99868	3.0698	1.22271	3.1667	1.04319	3.2444	1.22763	3.5000	1.08711	3.1569	1.18950
VAR10	3.1746	1.30186	3.2500	1.11803	3.1395	1.39012	3.2778	1.44733	3.1333	1.25408	3.6667	1.23091	3.0588	1.30249
VAR11	3.3492	1.28463	3.3500	1.08942	3.3488	1.37812	3.3333	1.23669	3.3556	1.31694	3.5000	1.31426	3.3137	1.28826
VAR12	3.8889	1.19287	3.3000(**)	1.26074	4.1628(**)	1.06749	3.8889	1.18266	3.8889	1.21023	4.0000	0.95346	3.8627	1.24931
VAR13	3.9841	1.00791	3.6000(**)	1.09545	4.1628(**)	0.92402	4.1667	0.85749	3.9111	1.06221	4.2500	0.86603	3.9216	1.03621
Valid N (listwise)	63		20		43		18		45		12		51	

(*) Significant at 10 percent

(**) Significant at 5 percent

(***) Significant at 1 percent

VAR1: Lack of VCs' interest in pre start-up phase investments

VAR2: Unwillingness of VCs to provide small amounts of capital

VAR3: Lack of understanding of the specific technology presented by many VCs

VAR4: Lack of registered patents

VAR5: Poor or defective quality of the presentation of the business plan

VAR6: Lack of entrepreneurial and managerial skills of the nascent entrepreneur and/or the management team

VAR7: Concerns over loss of control in the firm to be created

VAR8: VCs' expectations about rates of return

VAR9: VCs' expectations about the chances of quick exit

VAR10: Lack of information about the VC activities in Portugal

VAR11: Lack of VCs specific knowledge and skills

VAR12: Limited public policies to support venture capital participation

VAR13: Small size of the VC financing market in Portugal.

Economic effects of SMEs credit guarantee in Korea

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We analyze macroeconomic effects of Korean credit guarantees. The resulting impulse response function analysis associated with a VAR model shows that credit guarantee plays an important role in alleviating the economic fluctuation: the supply of credit guarantee expands during the economic recession and contracts when the economic situation is relieved. The virtuous cycle regarding the macroeconomic effects of credit guarantee has been built up, i.e., "increase of credit guarantee → (increase of loans to SMEs) → expansion of investment and employment → economic upturn".

Track: 11. Financing SMEs

SME Financing in Korea & the Role of Industrial Bank of Korea (IBK)

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SME financing policy in Korea can be largely classified into two categories, which are availability expansion policy and accessibility enhancement policy. This paper will present an overview on various financial policies that Korean government has implemented concerning the SME sector since the 1960s.

Industrial Bank of Korea as one of the main policy institutes in Korea has steadfastly upheld its founding purpose of advancing SMEs since the establishment in 1961. Specializing in SME financing, IBK delivers profitable growth and maintains financial soundness.

This paper will address IBK's role as a leader of SME financing in Korea and the success factors behind its achievements. Based on the case study of Korean SME financing and IBK, it will provide several insights to SME financing development strategies for SMEs' sound growth and competitiveness reinforcement particularly for developing countries.

Track: 11. Financing SMEs

Is it effective? - A New SME Financing Vehicle 'Network Loan' in Korea

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This is a study on a new financing method for SMEs which supply large companies with parts. Industrial Bank of Korea (IBK) introduced a new financing vehicle 'Network Loan (NL)' to support SMEs in 2003. The Network Loan is designed to supply funds with SMEs which have orders from large companies. IBK made an agreement with large companies to finance SMEs which are recommended by those large companies. SMEs can get financing from IBK to produce supply parts just by presenting a statement of placing orders from large companies. At a same time, Korea Credit Guarantee Fund (KCGF) issues a credit guarantee certificate for SMEs to make up for SMEs' poor credit. Network Loan has been expanded to most of commercial banks by introducing a revolving credit limit of SME that is one sixth of last year's order amounts from large companies.

The Network Loan is expected to promote cooperation between SMEs and large companies by helping SMEs produce supply parts for large companies without financial distress.

Track: 11. Financing SMEs

A theoretical model of SMEs alliance performance: relational capital, exchange climate and the moderating role of culture

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This paper examines how relational capital (trust and commitment) and exchange climate (conflict resolution, cooperation) of partners in international strategic alliances affect ISA performance and whether culture can moderate the relationship between partners, which have not been explored in the SMEs literature.

Of the relational capital and exchange climate aspects, exchange climate prove most consistently positively associated with performance. Conflict resolution of exchange climate is especially important in the performance in alliances with dissimilar cultures. Cooperation of exchange climate plays a key role in the performance in alliances with similar cultures.

Track: 12. Networking, Alliance and Outsourcing

Knowledge Exchange in Small Firms' Networks: a Computational Model

Luca Iandoli, Cristina Ponsiglione, Elio Marchione, Giuseppe Zollo

Abstract

This paper explores how specific structural properties of small firms networks emerge from the ways firms exchange knowledge. In particular we are interested in analyzing if and under which conditions the need for knowledge exchange within a set of co-located small firms is able to generate a more or less stable structure of links among firms. We focus on a specific kind of small firms networks such as Industrial Districts (IDs). One of the peculiar characteristics of IDs is flexible specialization: small firms specialize in given phases of the production processes and join up production chains in a flexible and dynamic way depending on market opportunities. Consequently knowledge exchange is mainly related to the matching of complementary knowledge assets. We developed a computational agent-based model of the ID to explore the influence of knowledge exchange mechanisms on network emergence and structure.

1. Industrial Districts and Firms' Networks

The notion of Industrial District (ID) was introduced by Alfred Marshall in 1919; he identified in the concept of external economies a crucial factor of competitiveness for local systems of specialized small and medium enterprises. Becattini (1979) identified the ID as an elementary and autonomous unit of analysis. In the relevant literature flourishing in '70s and '80s (Aydalot, 1986;

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Elio Marchione is PhD student at CRESS (Centre for Research in Social Simulation, University of Surrey) supervised by Nigel Gilbert. His research interests are in theoretical and methodological approaches to complex systems.

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Becattini, 1989; Brusco, 1982; Camagni, 1989; Rullani, 1992) IDs are characterized by two central properties:

- ID' s structure is based on a dense and strong network of relationships among autonomous and heterogeneous actors (firms, families, local institutions);
- ID' s competitiveness is the result of the co-evolution of district's productive organization and of local formal and informal institutions.

Piore and Sabel (1984) emphasized the ID model as an example of production model characterized by flexible specialization and able to compete with the large integrated enterprise. This approach focuses on transactions related to the productive interdependence of district's firms rather than on ID's informal coordination mechanisms such as values and culture.

However the transactional approach (Coase, 1937; Williamson, 1975) has shown to be inadequate to explain the complex nature of the embedded inter-organizational and social processes characterizing small firms clusters (Uzzi, 1996). Instead ID's development is based on a strong relation between production and social system, on spontaneous and informal transactions, on sharing of norms, frameworks of references, cultural rules, reciprocity and trust. In order to study the structure, nature and dynamics of relations that evolve inside IDs, it is necessary to find a more appropriate theoretical approach, which is able to consider the importance of institutional factors (norms, values, culture, routines).

The social network perspective, though acknowledging the relevance of transaction economics, emphasizes the cultural and institutional basis of inter-firms relationships (Granovetter, 1985; Powell, 1991). According to this perspective, the ID is framed as a social network including firms embedded in a social context strictly influencing their business performances and their behavior (Inkpen, Tsang, 2005). A key characteristic of social-organizational networks is the privileged access to knowledge resources for members of the network (Podolny, Page, 1998); specific and rare knowledge resources are created thanks to the strong capability of network's actors to exchange and combine knowledge assets.

Both traditional quantitative methodologies and social network analysis have been employed to find determinants of knowledge exchange in small firms clusters and in IDs. However, traditional social science methodologies are unable to explain the dynamic emergence of knowledge-based networks in small firms clusters and of their structural properties from the analysis of the bottom-up interactions of multiple co-located firms. In particular, while research on networks has widely

explored how networks structural properties influence knowledge flow in clusters (Cowan, Jonard, 2004; Cowan, Jonard, 2009; Dyer, Nobeoka, 2000; Provan, Fish, and Sydow, 2007), there is a lack of studies about how and if knowledge exchange can dynamically originate a stable network configuration. The main research questions we aim to answer in this paper are the followings:

- 1) Can local knowledge exchanges give rise to a stable network? More specifically, is knowledge complementariness, a recurring characteristic in partnerships in IDs, a sufficient reason to explain the emergence of a stable network?
- 2) Which is the structure of knowledge networks generated by the exchange of complementary knowledge assets?

In the next section we provide a review of previous works about knowledge flows in Firms' Networks. Then we present a computational agent-based model of an ID in which heterogeneous and autonomous agents trade complementary knowledge assets and build network relationships. Finally we present the results of computer simulations to answer to the above research questions. In the conclusions we discuss the limitations and the potential of the computational approach to the analysis of small firms clusters.

2. Knowledge flows in Firms' Networks

Firms' networks involve "a selected, persistent, and structured set of autonomous firms engaged in creating products or services based on implicit and open-ended contracts to adapt to environmental contingencies and to coordinate and safeguard exchanges" (Jones, Esterly, and Borgatti, 1997).

A firms' network is made by a collection of (often small) autonomous actors that pursue repeated and enduring reciprocal exchanges aimed at creating products or services for final markets. The term "structured" in the definition proposed by Jones et al. (1997) means that exchanges among firms are not random but reflect specific coordination patterns and shared rules for labor division. Repeated, enduring and structured relationships are the main rationale behind the capability of networks to spread and diffuse knowledge among their members. Relationships taking place in small firms' networks are characterized by "embeddedness" (Uzzi, 1996). The embeddedness means that social relations affect and shape the economic and the productive behavior of network members; thanks to embeddedness, actors in a network can safeguard their exchanges using implicit and incomplete contracts (Jones, Esterly, and Borgatti, 1997). The social embeddedness of ties

among firms in a network fosters information transfer and the creation of novel knowledge through trust and reciprocity (Podolny, Page, 2000), but can increase the network inertia to innovation and change.

Networks can be also seen as structure providing specific patterns of interactions facilitating transfer, diffusion and creation of knowledge. According to Kogut (2000) network is itself “knowledge” because it is guided by stable and enduring principles of organization.

From a social network theory perspective, research on networks has widely explored the problem of how structural properties of the network such as density, position of specific nodes, presence of hubs or of structural holes, presence of cliques, strength of ties, affect the efficiency and efficacy of knowledge exchange as well as learning performances of individual firms and of the network as a whole (Cowan, Jonard, 2004; Cowan, Jonard, 2009; Dhanaraj, Parkhe, 2006; Inkpen, Tsang, 2005; Podolny, Page, 2000; Tsai, 2001). By exploiting the concept of scale-free networks developed by Watts and Strogatz (1998), Cowan and Jonard (2004) developed a computational model to analyze the relationship between network architecture and knowledge diffusion performance and, specifically, how network topology influences knowledge sharing performances. In this paper we start from Cowan and Jonard’s model (2004) but follow the opposite perspective: can local knowledge exchanges give rise to a stable network? Is knowledge complementariness between firms a sufficient reason to explain the emerging of a stable network? These questions are particularly relevant for IDs, in which the complementariness of knowledge assets between firms through flexible specialization is a major economic explanation for ID emergence and success (Piore, Sable, 1984).

In order to answer to these questions we propose in the following section an agent-based model of the ID. Agent-based models have been largely employed for the analysis of Complex Adaptive Systems, that are systems characterized by intense local interactions among heterogeneous agents provided with bounded rationality, by the absence of central control, and by continual adaptation (Arthur, Durlauf, and Lane, 1997). These properties characterize also IDs, as showed by some studies on IDs, firm’s clusters and supply chains (Fioretti, 2001; Boero, Squazzoni, 2001; Strader et al., 1998; Pèli, Nooteboom, 1997).

According to the agent-based simulation approach, a possible way of explaining the emerging of macroscopic regularities in social systems is to answer to the following question (Epstein, Axtell, 1996): “Is it possible to generate observed macro-regularities at the collective level from micro-specifications governing local and de-centralized interactions of autonomous and heterogeneous

agents?” A possible way to answer to this question is to simulate through a computer model the interaction of autonomous agents provided with bounded rationality within a virtual environment bearing both resources and constraints.

3. A Computational Model of the Industrial District

The structure of proposed model is similar to the one proposed by Cowan and Jonard (2004), but it differs for one fundamental reason: the Cowan and Jonard model assumes as given the topology of the network and the authors analyze the relationship between network architecture and knowledge diffusion performance. The authors show that small world networks, i.e. networks in which a few hubs act as shortcuts between many spokes-agents, achieve the best performance in terms of network average knowledge level as well as satisfying results in terms of knowledge diffusion speed. Roughly speaking, small world networks ensure high speed of diffusion preserving, at the same time, internal diversity, which will be instead quickly lost in an over-connected random network. The price to pay is the asymmetry in knowledge distribution: a few agents in the network will become key players by accumulate disproportionately more knowledge than others (the so-called “rich gets richer” phenomenon).

In our model the network topology is not assumed. Instead we let a bunch of agents with complementary knowledge assets trade with each other and establish links among them when a reciprocal exchange of complementary knowledge assets is possible. Our aim is to observe the network emerging from repeated interactions and check if and under which conditions, a stable network emerges.

In the following sub-sections we describe the main modeling decisions and the components of the model.

3.1 Time & Space

Simulation time is given by an internal clock defining simulation cycles during which the agents interact. The model can be run through several iterations until either equilibrium is achieved or for a given number of iterations, depending on the objectives of the simulation.

Firms are represented through a set of agents characterized in terms of behavioral rules. The model has been implemented using NetLogo® software, a freely downloadable social simulation software developed by Northwestern University. In the NetLogo graphical interface the agents are arranged into different layers, representing different levels of specialization of firms in a typical vertical ID (Figure 1).

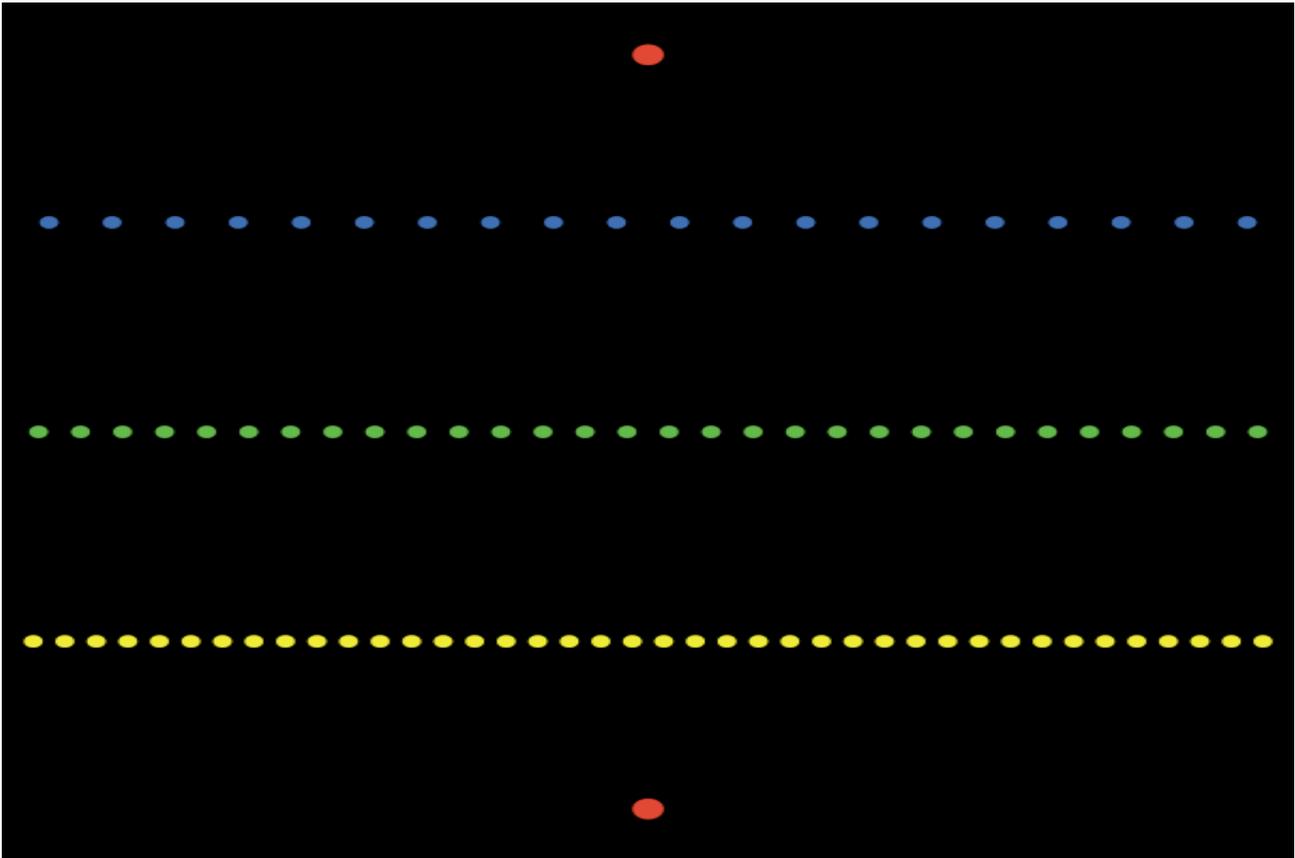


Figure 1

Graphical representation of the cluster through NetLogo interface

Blue agents in Figure 1 represents final firms, having direct access to the market (the top red circle in Figure 1); green agents are first level suppliers (named in the following as “Direct Firms”), that can exchange goods and information with final firms and with second level suppliers; yellow agents are second level suppliers. Yellow agents receive raw materials and resources from the agent represented by the bottom red circle in the interface.

A major simplification in the model is that the cluster is a closed system in which external firms cannot enter. Though this represents a limitation of the model, in stable phases of their existence

IDs can be assumed as closed systems because of a low rate of entrants and high level of embeddedness of existing links.

3.2 Agents

Agents in our model represents cluster's firms. To each agent of the model is associated a vector of knowledge assets:

$$K_j = [c_{j1}, c_{j2}, \dots, c_{jn}]$$

Each dimension c_{ji} represents the knowledge level achieved by the firm j -th in the i -th asset. Knowledge levels are measured through real positive numbers in the interval $[0,100]$. In our model we set $n=3$. Consequently, firms can belong to one out of three classes, depending on their knowledge assets specialization. In the model there are 90 firms of which 20 are final firms (blue circles) specialized in c_1 , 30 are direct suppliers firms specialized in c_2 (green circles), and 40 are second level suppliers (yellow circles) specialized in c_3 . These proportions roughly reflect firm's distributions in real IDs characterized by flexible specialization. Two further agents are introduced: the Bottom Resource and the Top Resource. Links to those agents replicate the knowledge transfer process respectively from raw material suppliers to 2nd level suppliers and from final firms to the market.

At the beginning of the simulation to each firm is assigned a random value in the interval $[5, 10]$ for the knowledge asset the firm is specialized in and the value 5 for the other two assets. Consequently knowledge vectors are defined as follows:

- Yellow firms $\rightarrow K = [c_1, c_2, c_3] = [5 + \text{random } 5, 5, 5]$
- Green firms $\rightarrow K = [c_1, c_2, c_3] = [5, 5 + \text{random } 5, 5]$
- Blue firms $\rightarrow K = [c_1, c_2, c_3] = [5, 5, 5 + \text{random } 5]$
- Top and Bottom Resource $\rightarrow K = c_s = 5$

To each agent is also assigned a certain value of absorptive capacity (AC). Cohen and Levinthal (1989) assume that knowledge spillovers from one firm to another can happen to the extent to which a firm can interiorize and appropriate knowledge. This ability ultimately depends on the firm's absorptive capacity. AC is a function of the knowledge a firm already possesses and is ultimately influenced by factors such as amount of R&D activities and investments in knowledge assets and human capital. The AC is path dependent: as companies increase their knowledge stocks they also are more and more aware of their knowledge needs and able to find and connect with

relevant external sources of knowledge. In other words AC involves both internal and external learning. Since AC is a function of existing specific knowledge we associate to each firm a three-dimensional vector $A-C = [a-c1, a-c2, a-c3]$ whose elements assuming values in $[0,1]$ represent the AC associated to the i -th knowledge asset. A simple way to model the dependency of $a-ci$ from existing knowledge is to assume a direct proportionality in the following way:

$$a-c1 = c1 / 100$$

$$a-c2 = c2 / 100$$

$$a-c3 = c3 / 100$$

At the beginning of the simulation each agent is given a certain knowledge level depending on its specialization and, consequently, a certain $a-ci$. During the simulation knowledge levels can increase or decrease under the influence of learning and obsolescence. In the model learning happens in two possible ways: internal and external. Internal learning is directly influenced by R&D activities or experience (learning by doing) while external learning is due to interactions with external knowledge sources (learning by interacting).

Firms are allowed a maximum number of outgoing links L . This is a reasonable assumption since interaction involves transaction costs; in particular, small firms can manage only a limited number of partners at the same time, though they can build relations with many partners during their life. By limiting the number of simultaneous partners we also force firms to choose among possible partnership alternatives.

3.3 Network construction

Figure 2 reports a flow chart describing how firms make decisions about building or breaking links in the cluster. All firms contribute to the creation of links among them through the following steps:

1. Internal learning: each firm increases the value of the knowledge it is specialized in of an amount equal to its AC in that knowledge. Consequently at time $t+1$ firms knowledge evolves in the following way:

Final firms (blue) →

$$c1(t + 1) = c1(t) + a-c1$$

$$c_2(t + 1) = c_2(t)$$

$$c_3(t + 1) = c_3(t)$$

Direct suppliers (green) →

$$c_1(t + 1) = c_1(t)$$

$$c_2(t + 1) = c_2(t) + a - c_2$$

$$c_3(t + 1) = c_3(t)$$

2nd level suppliers (yellow) →

$$c_1(t + 1) = c_1(t)$$

$$c_2(t + 1) = c_2(t)$$

$$c_3(t + 1) = c_3(t) + a - c_3$$

A different function for Top and Bottom Resource agents is assumed. Basically they increase their own knowledge following a polynomial function of grade equal to 2.

$$\text{Top and Bottom Resource } c_s(t) = \left(\frac{t^2}{100} \right) * 100 + 5$$

2: Check links: each firm checks for the number N of active links. If $N=0$ the firm starts looking for a partner by picking another firm at random. If complementariness between knowledge assets exists, the two firms establish a link. The closer the level of complementary knowledge, the more the probability of creating a link. This probability is computed through the following function: $(1 - (\text{abs}(c_i - c_j)) / (\max(c_i, c_j)))$.

This rule is applied every time two agents try to create a connection. In particular:

- Bottom Resource attempts to create a link to a 2nd level supplier, the likelihood of establishing a link is given by the rule above;
- if 2nd level suppliers have both one incoming link and a number N of outgoing links $\in [0, (L - 1)]$, they start looking for a partner by randomly picking a Direct Supplier firm, the likelihood of establishing a link is given by the rule above. If $N = L$ or no incoming link is detected, they do nothing;

- the same procedure is applied for Direct suppliers and Final firms but they point to Final firms and Top Resource respectively. Final firms have maximum number of outgoing links to Top Resource equals to one.

The process stops when the number of links achieves the maximum allowed value L . It is important to remark that L is a limitation only for the outgoing links, thus the overall number of links for a firm can be higher than L if there are enough incoming links from other partners.

3: External learning: external learning takes place through the same mechanism proposed by Cowan and Jonard, i.e. through knowledge reciprocal transfer from two firms having complementary knowledge assets, like in barter. The knowledge gain is determined in the following way:

$$c_i = a - c_i.$$

A single unit of knowledge is transferred between two agents per time step. The acquired amount of knowledge is equal to each agent absorptive capacity.

3.4 Obsolescence

To balance the learning effect that would imply a continuous growth of knowledge levels in each iteration, an “unlearning effect” has been introduced. Knowledge levels are decreased in each iteration of an amount equal to the obsolescence rate. This is modeled through a parameter obs ranging from 0 to 1 and assumed to be a constant. So knowledge levels will decrease with a constant pace after each cycles and firms who are not able to counterbalance this effect through learning will die.

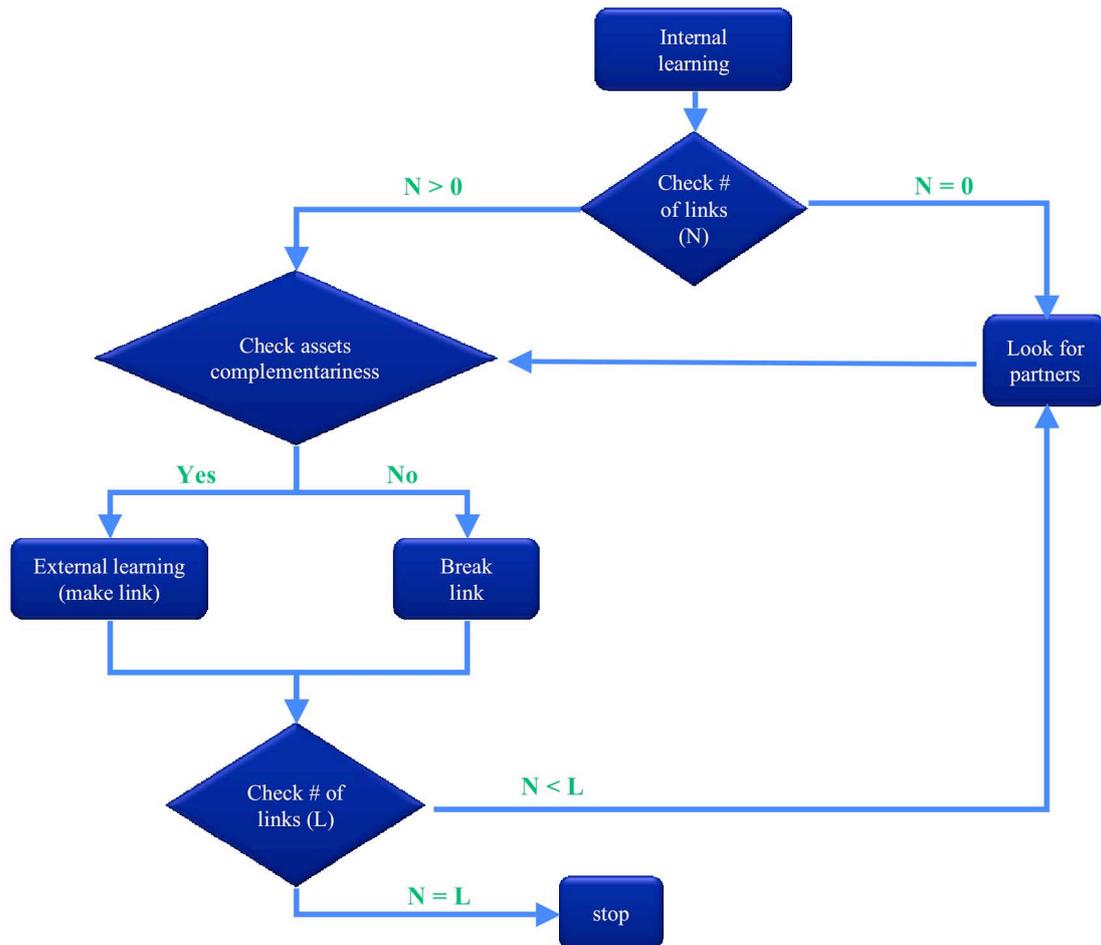


Figure 2
Network building flow chart

4. Settings and Results

The initial number of firms populating the cluster was fixed equal to 90 firms of which 20 are final firms (blue circles) specialized in c_1 , 30 are direct suppliers firms specialized in c_2 (green circles), and 40 are second level suppliers (yellow circles) specialized in c_3 . We designed four experimental sets, and we ran one hundred simulations for each of them. In the Experiment 1 L was initialized equal to a random value between 1 and 5, in the Experiment 2 L was initialed randomly between 2 and 4 and L is equal to 3 in the Experiment 3. In the Experiment 4, L is fixed equal to 10 for one agent of each layer and equal to 3 for the other firms.

If we run a simulation with identical parameters setting twice, different nodes will survive, different relations among them will be established and therefore different links distributions will be outputted. Since one of our aims is to investigate the extent to which the parameter L affects the

network structure, we need of a suitable way to univocally classify network structures without losing result significance.

As shown in Figure 3 the network we are dealing with is pretty peculiar, it can be thought of as several stars overlapping each other.

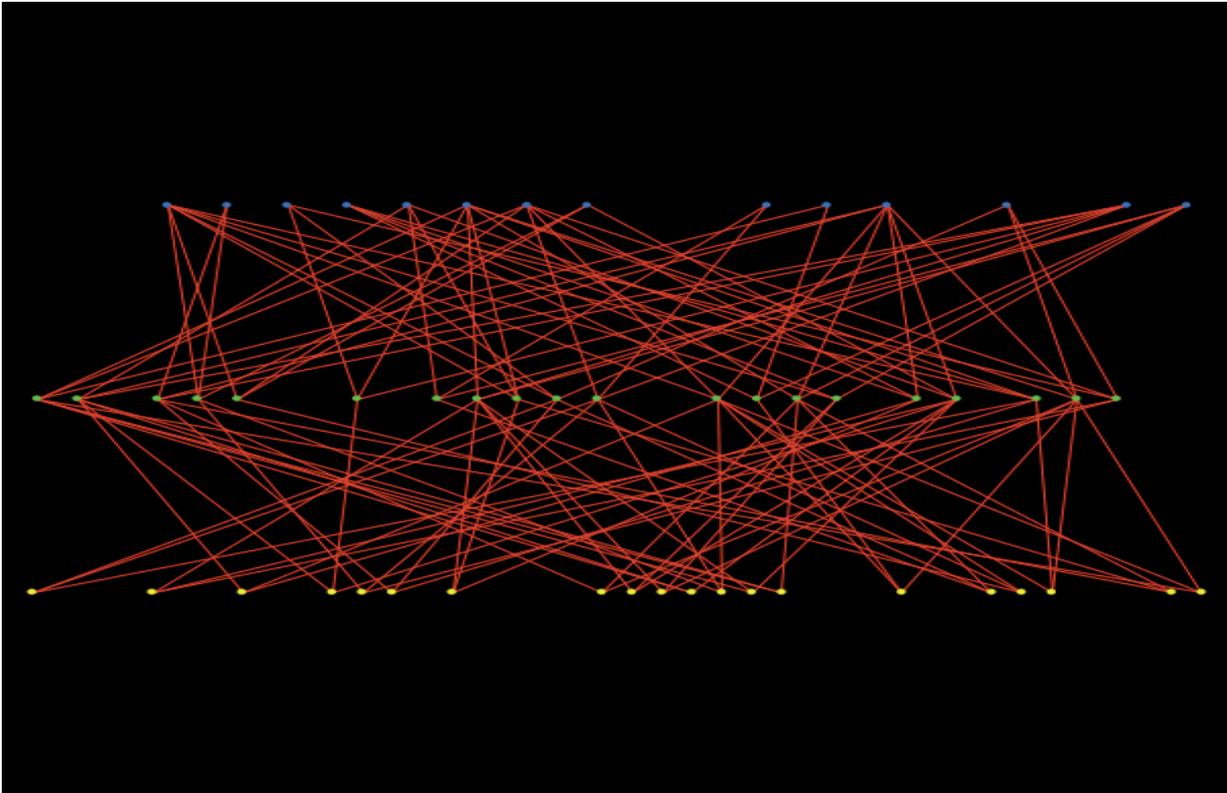


Figure 3

The representation of links among cluster's firms

The most common way to classify a network is through the measures provided by Social Network Analysis (SNA). In our case, SNA cannot help us out to identify network structures, measures such as centrality or path-length they don't give us any useful information, no matter what kind of network is observed, those measures return always the same values. Neither measures coming from small-world phenomena are feasible for our purpose; our nodes don't create any cluster. We assume only "vertical" relations. The one measure that can univocally classify our simulation outputs is a measure of link distribution. Whereas numerical measures can be easily cumulate and manipulate through mathematical tools, cumulating and manipulating distributions without losing result significance is not straightforward. Therefore, we need of an appropriate method to investigate our research questions. Basically, two questions rise. How can we cumulate those distributions? How can we capture and generalize the most held network structure for a given simulation setting? Here we propose a method that allows us to analyze and compare such simulation outputs. This method

is based on the Kolmogorov-Smirnov (K-S) test (Chakravarti, Laha, and Roy, 1967). Without being exhaustive the K-S test can be thought of as goodness of fit test. This computes a distance estimation between two samples, and tells us whether those two samples come from the same distribution. We compared each simulation output with a gamma distribution with a significance level α equals to 0.05. The gamma distribution is useful for this purpose because it can describe a wide range of distributions with just two parameters: scale and shape. For each simulation output we performed the K-S test with scale ranged between 1 and 4 with step 0.5, and shape between 1 and 9 with step 1, then we chose the pair with lowest p-value. All the chosen p-values are smaller than the significance level. We cumulated the so obtained scale and shape pair in a bar plot. In this way we can estimate the model robustness and the more likely link distribution for each simulation setting.

4.1 Results

Comments and analysis on the experiments are thrown by means of three charts. First, a bar plot for the K-S test; this shows the occurrence of each scale and shape pair and allows us to capture the most held network structure for the current experiment. Second, a histogram showing the link distribution for a single simulation; this is useful to investigate how the knowledge level specialization affects the network structure at the equilibrium. Third, two line charts illustrating the knowledge growth for a single simulation.

In Figure 4 we report the bar plot for the K-S test obtained in the case of Experiment 1 (a similar bar plot can be observed in the other experimental sets). This plot shows that the most observed shape-scale couple is 6, 2; this means a link distribution with a rounded pick and large right tail. Figure 5 shows an example of the most held network structure. It is interesting to observe that 2nd level suppliers generally have smaller degree than Direct Firms, whereas Final Firms have a wide range of degree. The results showed in Figure 4 and in Figure 5 allow us to answer to our research questions: the outputs of simulation permit to state that a stable network emerge from local interactions among firms of a cluster exchanging complementary knowledge assets; the most observed topology of the network is represented by a random graph. This kind of result is not affected by the values of parameter L .

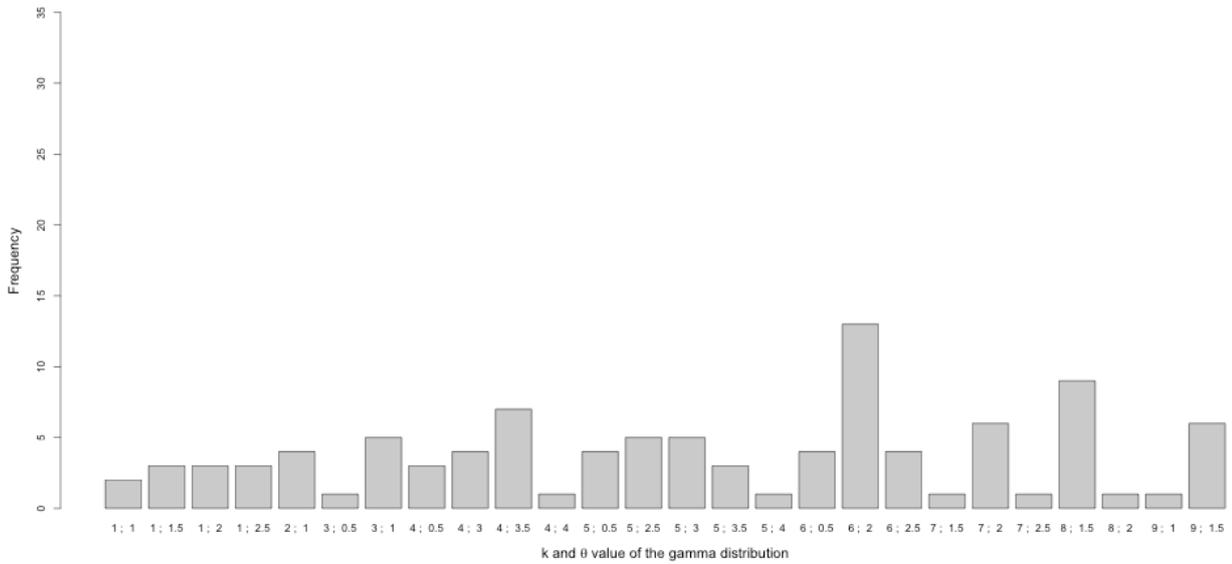


Figure 4
The bar plot for the K-S test

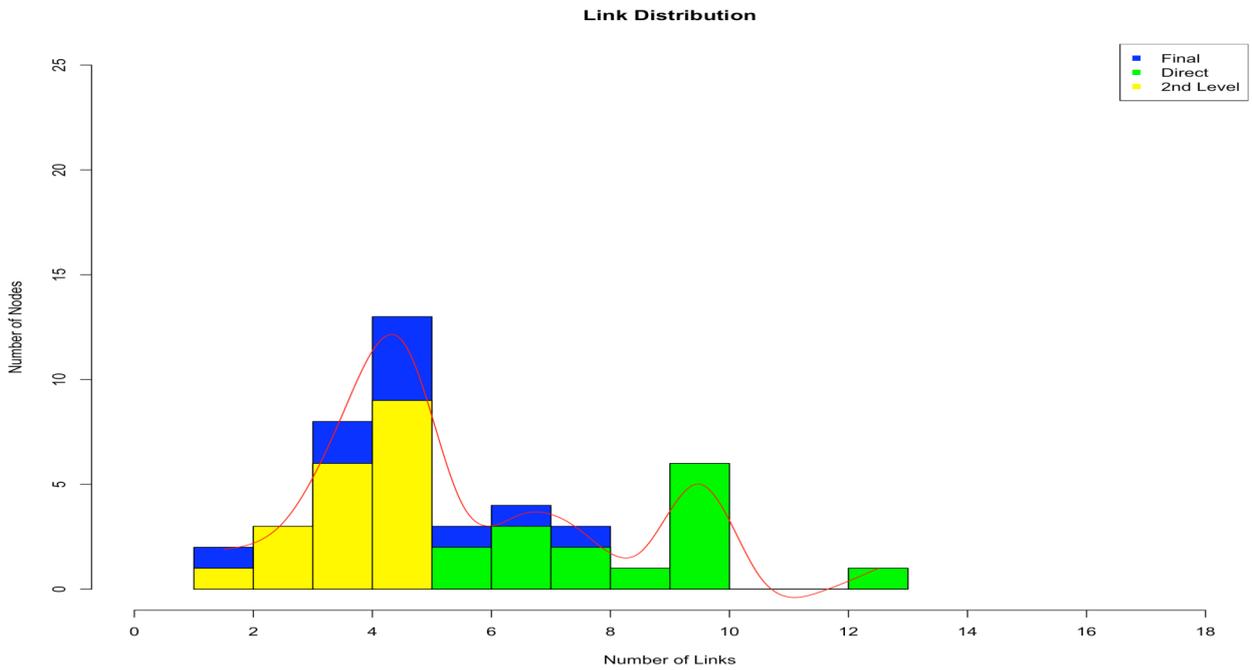


Figure 5
The link distribution in the held network structure

Figure 6 reports the behavior of the cluster in terms of knowledge accumulation performances.

In particular, the bottom graph of Figure 6 shows that the process of knowledge accumulation at the firm and at the cluster level follows the well-known S shaped knowledge behavior. The graph also shows that Direct Firms (first level suppliers) drive the process of knowledge accumulation and drag up the other firms.

The top graph of Figure 6 reports the number of firms that reach the maximum level of knowledge ($c = 100$) during simulation periods. This line chart manifests how the different timing of reaching the knowledge limit brings about the S shaped trend and affects its slope.

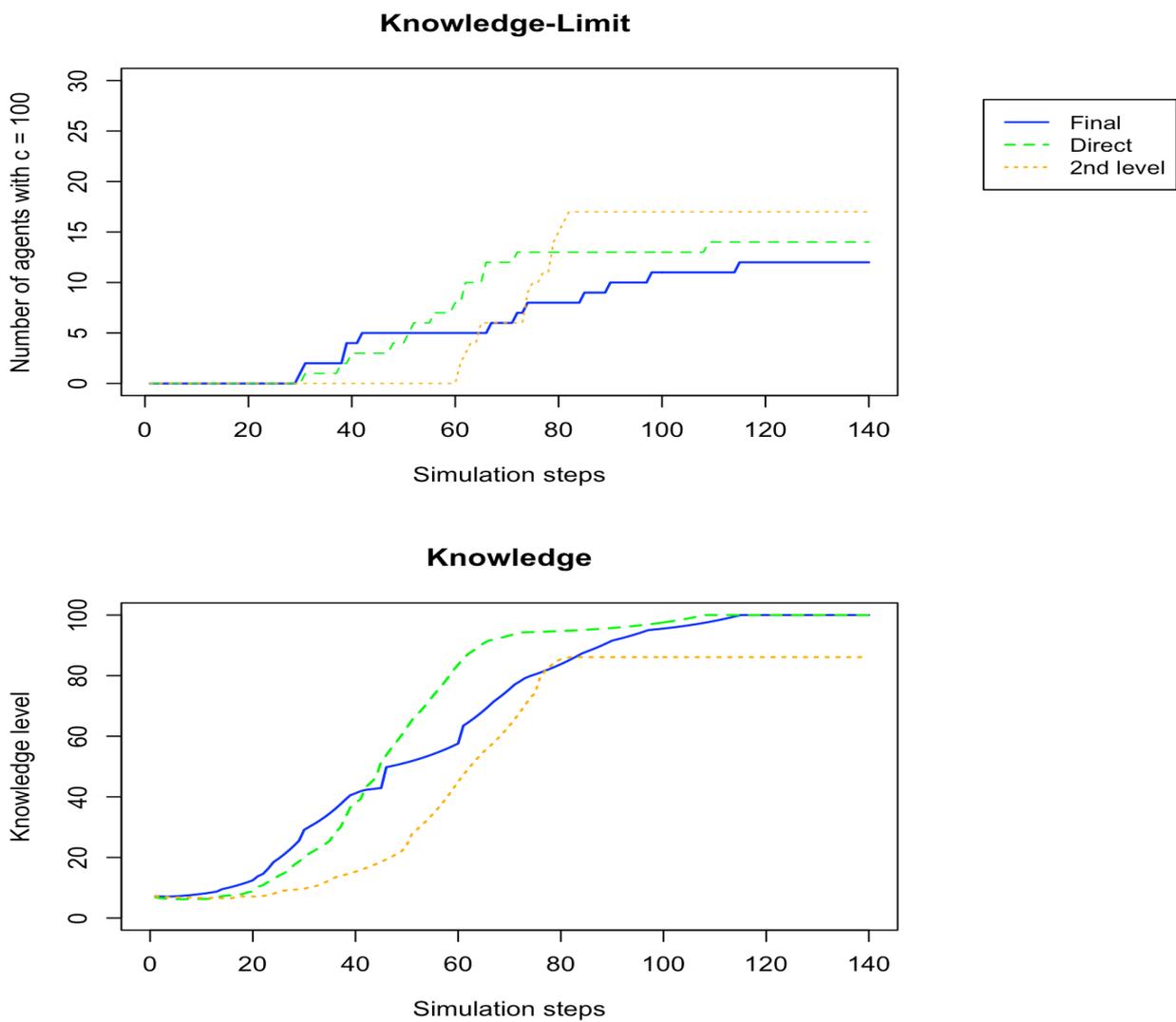


Figure 6
The knowledge accumulation process

5. Conclusions

In this paper we use agent-based modeling to represent and analyze the behavior of co-located small firms' clusters. Previous research works on firms' networks can be roughly classified in two major streams: studies in the first stream assume the network as given and are concerned with measuring of network properties and performances; works in the second stream use traditional statistical methods to find out the determinants of network. Our objective instead was to explore the process through which networks are built and emerge from interactions among heterogeneous and autonomous agents. In particular we focused our attention to knowledge exchange in the assumption of complementariness between firms knowledge assets, as it happens in Industrial Districts whose coordinating mechanism is based on flexible specialization. Our next research step is to test for the proposed model ability to predict the network structure of real IDs.

The possibility to observe the processes through which social aggregates are formed represents a major advantage of agent-based modeling over traditional methodologies in social sciences. Like narrative or qualitative methods, agent model can be used to provide causal accounts of collective phenomena, but in addition they offer the rigor and the objectivity of traditional quantitative methodologies. A second advantage of ABM is to provide researchers with a virtual lab where generative experiments can be performed to test if specific assumptions about individual agents behavior are sufficient conditions to generate expected emergence of aggregate regularities.

The sufficiency of explanation is a major limitation of this methodological approach. A second major limitation of agent-based models is that they can implement extremely simplified representation of the reality they intend to model. However, it is important to stress that the use of ABM for predictions or simulation of real systems' behavior can hardly be successful when the complexity of the systems is too high to be captured by analytic yet tractable representations. ABM is instead to be used for purposes that go beyond the "representational" trap, namely for theory testing and building purposes. Being extremely reductionist, this approach can help researchers to reflect on and find out the critical relevant variables in the elaboration of a theory. Being computational, ABM can be used to see theories in action, e.g. to observe incoherence or unexpected consequences of a theory. Finally, as with any theory, also a computationally generated theory can be evaluated on the basis of traditional epistemic criteria such as its explanatory power.

In ABM there is considerable value added in the same process of model construction since computation enhances the traditional learning process through which researchers learn from their errors, through early, quick and dirty implementation and simulation of models.

There are several warnings. First there is a risk of developing tautological models, i.e. models containing argumentative loops in which at least some of the hypotheses to be tested may be actually hidden assumptions. Second, the representational trap can induce to build very complex models characterized by too many parameters whose robustness and relevance is hard to assess.

The results produced by agent-based modeling can be used to construct hypothesis to be tested through traditional empirical investigation. In the IDs case, for instance, one can investigate more in depth about how absorptive capacity is influenced by structural properties of the network.

Agent-based modeling can have also interesting implications for managers and policy making. Again, their power is not in simulating reality to make predictions, but to help managers and policy-makers to observe the coherence of certain choices, their potential unexpected consequences as well as to find creative ways to deal with specific problems thanks to a deeper understanding of problems.

References

- Arthur W.B., Durlauf S.N., Lane D.A. (eds) (1997). *The Economy as an Evolving Complex System*. Redwood (CA): Addison-Wesley Longman.
- Aydalot P. (ed. by) (1986). *Milieux Innovateurs en Europe -Innovative Environments in Europe*, Paris, Université de Paris I Sorbonne, GREMI -Groupement de Recherche sur les Milieux Innovateurs en Europe.
- Becattini G. (1979). “Dal settore industriale al distretto industriale. Alcune considerazioni sull’unità di indagine dell’economia industriale”, *L’Industria*, n. 1.
- Becattini G. (1989). “Riflessioni sul distretto industriale marshalliano come concetto socio economico”, *Stato e Mercato*, 25, 111-128.
- Boero R., Squazzoni F. 2001. “A computational prototype of industrial district”. Workshop on Complexity and Industrial Districts, Università di Modena e Reggio Emilia.
- Brusco S. (1982). “The Emilian Model: Productive decentralisation and social integration”. *Cambridge Journal of Economics*, 6, 167-184.
- Camagni R. (1989). “Cambiamento tecnologico, milieu locale e reti d’imprese: verso una teoria dinamica dello spazio economico”. *Economia e Politica Industriale*, 64, 209-236.
- Chakravati I., Laha R.G., Roy J., (1967), *Handbook of Methods of Applied Statistics, Volume I*, John Wiley and Sons, pp. 392-394.
- Coase R. (1937). “The Nature of the Firms”. *Economica*, vol. 4(16), pp. 386-405.
- Cohen W., Levinthal D. (1989). “Innovation and Learning: The Two Faces of R&D”. *Economic Journal*, 99, 397, 569-596.
- Cowan, R., Jonard, N. (2004). “Network structure and the diffusion of knowledge”. *Journal of Economic Dynamics & Control*, 28, 1557 – 1575.
- Cowan, R., Jonard, N. (2009). “Knowledge Portfolios and the Organization of Innovation Networks”. *The Academy of Management Review*, Vol. 34, No 2, 320 – 342.
- Dhanaraj C., Parkhe A. 2006. “Orchestrating Innovation Networks”. *The Academy of Management Review*. Vol 31, No 3, 659-669.
- Dyer J. H., Nobeoka K. (2000). “Creating and managing a high performance knowledge-sharing network: the Toyota case”, *Strategic Management Journal*, 21, 345-367.
- Epstein J., M., Axtell R., (1996). *Growing artificial societies: social science from the bottom up*. Brookings Institution Press
- Fioretti G. (2001). “Information Structure and Behaviour of a Textile Industrial District”. *Journal of Artificial Societies and Social Simulation*. 4(4).
- Granovetter, M. (1985). “Economic Action and Social Structure: The problem of embeddedness”. *American Journal of Sociology*. 91,3, 481-510.

- Jones C., Hesterly W. S., Borgatti S. P. (1997). "A general Theory of network Governance: Exchange Conditions and Social Mechanisms". *The Academy of Management Review*. Vol. 22, No. 4, 911-945.
- Inkpen, A. C., Tsang E.W.K. (2005). "Social Capital, Networks, and knowledge transfer". *The Academy of Management Review*, Vol 30, No. 1, 146-165.
- Kogut B., 2000. "The Network as Knowledge: Generative Rules and the Emergence of Structure". *Strategic Management Journal* , 21: 405-425.
- Marshall A., 1919. *Industry and Trade*, London: MacMillan.
- Piore M.J., Sabel C.F., 1984. *The Second Industrial Divide: Possibilities for Prosperity*, New York: Basic Books.
- Péli G., Nooteboom B., 1997. "Simulation of Learning in Supply Partnership". *Computational & Mathematical Organization Theory*, 3(1): 43-66.
- Podolny J. M.,Page K. L., 1998. "Network Forms of Organization". *Annual Review of Sociology*, 24: 57-76.
- Powell W.W., 1991, "Expanding the Scope of Institutional Analysis", in Powell W.W., Di Maggio P.J. (eds), *The New Institutionalism in Organisational Analysis*, Chicago, The University of Chicago Press, pp. 183-203.
- Provan K. G., Fish A., Sydow J., (2007). "Interorganizational Networks at the Network Level: A Review of the Empirical Literature on Whole Networks", *Journal of Management*, Vol. 33, No 3.†
- Rullani E. 1992. "Networks and Internationalization: Managing complexity through knowledge". In: L. Zen, S. Zambon and A.M. Pettigrew (eds.). *Perspectives on Strategic Change*. Norwell (MA): Kluwer Academic Publishers.
- Strader, T.J., Lin F., Shaw M.J. 1998. "Simulation of Order Fulfillment in Divergent Assembly Supply Chain". *Journal of Artificial Societies and Social Simulation*, 1(2).
- Tsai W., 2001. "Knowledge Transfer in Intraorganizational Networks: effects of network position and absorptive capacity on business unit innovation and performance". *The Academy of Management Journal*, Vol 44, No., 5, 996-1004.
- Uzzi B., 1996. "The sources and consequences of embeddedness for the economic performance of organizations". *American Sociological Review*, 61: 674-698.
- Williamson, O. E. (1975). *Markets and Hierarchies: Analysis and Antitrust Implications*, New York: The Free Press.

Networks, Inter-organizational Cooperation, Alliances and Social Capital in Entrepreneurship and Small Business: A Bibliometric Analysis of 1,239 Papers

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This paper uses bibliometric methods to analyze entrepreneurship literature (with a focus on networks, social capital / embeddedness, alliances, or cooperation). Findings suggest that this sub-domain is an adolescent field of research. The literature is showing particular patterns of established academic areas. Regarding the question of “doing work that matters” (see Academy of Management Learning & Education) citation analyses find that the modus for received citations is zero. Rankings of most important articles (1% of articles receive 40% of citations), authors and journals show different results whether they are based on entrepreneurship literature or on a broader data base provided by Google Scholar: Authors who are very important inside the research community might be less important when viewed from the outside and vice versa. The potential impact of articles in editorial books is underestimated, whereas the impact of journal publications is overestimated.

Track: 12. Networking, Alliance and Outsourcing

An Empirical Study on the Relationship between Entrepreneurial orientation, market environment and Performances of Entrepreneurial Networks

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Abstract

Entrepreneurship is the process of recombination of resources within and among networks of entrepreneur. There are various kinds of business network including personal and social network, network with professional in diverse fields, and the relations with investors. The purpose of this research is to analyze the impact of entrepreneur's networks on business performances and as antecedents of the entrepreneurial networks, entrepreneurial orientation of CEOs and market environment are tested. This empirical results show significant relationships between entrepreneurial network and diverse performances as well as the effects of environmental orientation and market environment on networking. Second, we could find the moderating effects of entrepreneurial network on relationship between the level of entrepreneurial orientation and the performance of tenant firms. This implies for CEOs of tenant firms to effectively use their resources along their networks.

Keywords: Entrepreneur's network, Entrepreneurial orientation, Environment, Performance

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I. Introduction

In these days, competition deepening of firms which is caused by the sudden change of the social, economical, and technical environment leads the small business to make an effort on organic interactions thorough network activities with the other major economic firms in necessity. The small businesses have merits to manage flexibly and agilely. However, there is a need of the organic network between firms since it is difficult to satisfy new competitive requirements with small capital. Therefore, it is recognized as the important factor of success for the small business to cope with the market shift through augmentation of the intervention between the other major economic firms (Han Gae Sook· Kim Jae Ook ·Choi Ji Ho, 2007).

Like this, the firms develop the resources and abilities internally and tend to rely on the network for acquiring the specialized resources. Especially, the small business can maintain the competitive power in market by forming the various types of network and achieving the informational, technological and other opportunities in business. Network theory proves that the entrepreneurial network ability makes the resources, which are not under controlling oneself, approach with an efficient expense and it can have effects on the starting up companies' performance (Watson, 2006; Jung Dae Yong, Yang Jun Wan 2008).. The government supports the efficient operation and the technical development of starting up companies by founding Business Incubator (BI) in each regional university in order to increase its possibility of achieving successful results Business Incubator grows so fast quantitatively but the systemic research on its effect of business. Specially, the research on the impact of CEOs of tenant firms in Business Incubator is insufficient in reality.

This research examined the factors which have effects on business performance from 3 viewpoints under-mentioned. The first factor is entrepreneurial orientation(Herron(1992), Kao(1995), Dollinger, Golden & Saxton(1997), Slevin & Jallio(1990) Covin and Slevin(1991)). The entrepreneur is a person who receives the overall responsibility on the growth and development of the enterprise and become the motive power which leads the development of the enterprise by providing the strong propulsive power and behavior motive. Second factor is the market environment. Followed by the market environment, the opportunity and the condition of resource can change (Bahn et al, 2008). Third factor is the impact of CEOs tenant firms in of IB (business incubator: BI), especially effects on the entrepreneurial network.

Despite these three factors (Entrepreneurial orientation, market environment and CEOs' network) are the essential factors to be alive for the initial founding enterprises, its research on examining the business performance by considering all of these factors are insignificant in Korea. The purpose of this research is to analysis and to demonstrate the impact of these three factors such as entrepreneurial orientation, market

environment and network on business performance. This dissertation set a study model and show the result of the hypothetical experiment based on the theoretical background. Finally, it summarizes the result of this research and it presents the limitation and the direction for the future research.

II. Status Quo of Business Incubator in Korea

The establishment of Korean business incubator programs accomplished the various supports of tax reduction for human resource, funds, technique, the marketing, etc, to the new venture based on the special care law of the government which relates with small and medium business. Tax reduction for human resource and funds support were given for the establishment of Business Incubator. These supports were mainly for Business Incubator founding, operating cost support, income tax and corporation tax and a local tax reduction on the real estate acquisition for Business Incubator. To summarize these supports, they are seen in <Table 1> below.

<Table 1 > Contents of support for business incubation

Category	Support	Reference
Funds supports	Erecting and operating cost support	1998 ~ 2004 second half-year Total amount (6,000million won) (central government, regional self government group)
Tax reduction for human resource supports	Reduction of Corporation tax, acquisition tax, registration tax and property tax	Special tax limitation law Article 6 Section 1 Local tax law Article 280 Section 4
Other supports	Financial independence support for Superior Reflection of “Establishment achievement” by BI University of comprehensive assessment Tax reduction of State-owned assets for national university-based BI Support for building capability of staffs Marketing support to BI firms Constructing global BI-related network Rewards for the result of incubation and BI-CEO and manager of superior BIs	Integration of managing business incubator programs by SMBA for the solution to improve the performance of BIs (Running on 2005 ~)

Source: SMBA (2007)

The basic operation services are provided inclusively by the center, the services of more professional field are to be operated by the external agency, and the network and the consultation among the group. The

number of business incubator was 269 in Korea at the end of 2007. If we try to observe the feature on the regional spread of Korean Business Incubator, university BI is widely ranged. However, business incubator which is established by the general public and the civil enterprise research workers are agglomerated within the Daeduk Valley. Korean Business Incubator is occupied by the university. Observing the achievement results of Business Incubator designated by Small and Medium Business Administration (SMBA) up to 2007, the tenants are 4,441 companies, the graduates are 6,151, total sales of the tenants was 2,305.4 billion won, new jobs were offered for 22,569 people, and 40 firms went to public in KOSDAQ.

III. Theoretical Backgrounds

1. Entrepreneurial Orientation

According to Herron(1992), Dollinger, Golden & Saxton(1997), Slevin & Jallio(1990) etc., the entrepreneurship is a innovative, risky, and proactive operation which brings resource redistribution or recombination for creating a new value. However, the entrepreneurship and Entrepreneurial orientation are used indiscriminately in most documents. Lumpkin and Dess(1996) proposed the concept of entrepreneurial orientation. Also, they suggested a contingency model for describing relation between entrepreneurial orientation (EO) and business performance where environmental and organizational factors were defining factors.

Covin and Slevin(1991) brought innovativeness, Proactiveness, and risk taking to the conceptual model of entrepreneurship. Also, they suggested what kind of relations those factors have with the variables such as environment, strategy, and organization, and what effects are brought between those and business performance. Their research hypothesis sets the conceptual model of entrepreneurship and they insisted that business performance should be considered as a dependent variable of entrepreneurship through the theoretical study of the relation between innovativeness, pro-activeness, and risk taking propensity. In the actual study of associations between entrepreneurship and teamwork, Zahra(1991) indicated that there are the positive(+) relation between entrepreneurship and business performance (profitability and growth potential).

2. Entrepreneurial networking and business performance

Based on Coleman(1988)'s view, the information is important in concluding one's opinion but the expenses are spent to get the information. Therefore, he treated networking as the effective method to acquire the important information. Kogut and Zander(1992) insisted that the enterprises internally develop the resources and abilities by focusing on the core competence and have tends to rely on the

network to get the specialized resources. This implicates the enterprises do not have the same competence in amount. Therefore, there could be the various specialized advantages for the enterprises which can be used efficiently. Jung Song Wha and Lee Kyong Mook (1996) grasped the point that the present correlations between the enterprises are the mirror of social network accumulated and developed antecedently and are the steps of accumulation for the social overhead capital which could have effects on the future. Also, the entrepreneurial reputation which formatted from these steps have effects on the relative competence and on forming correlations which influence on the long term entrepreneurial performance. The reasons of doing the entrepreneurial and organizational networks are to diverse risks and to use the competence owned by own company efficiently by recombine the networking members' competence effectively.

In the case of the entrepreneurs of high-growth enterprises, they stated that there are needs of their network developing beyond the individual and regional networks (Fischer and Reuber, 2003). Similar to this insist, the innovation theory clarifies that the network is important for the diffusion of innovation (especially, for the case of gathering up weak relations). Therefore, the entrepreneurs of the small business who are trying active networking are achieving better performance than ones who are not trying (Havens and Senneseth, 2001).

Duchesneau and Gartner (1990) believed that more successful companies tend to make better use of experts' advices. Hasen(1995) showed that the entrepreneur network is related with the entrepreneurial performance and derived the entrepreneurial variables from the interview with 44 entrepreneurs. He, also, believed that the derived variables are the network size, network relations' trust, and the frequency of the entrepreneurial network on relationship and it would have positive effects on the entrepreneurial growth.

Lerner, Brush and Hisrich(1997) made a point that the network activities are similarly related with the entrepreneurial profitability. However, Larson (2003) and others found the fact that the lack of networking with the external experts led to the failure of the small business' extend.

Watson(2006) concluded that the weak ties could be more important than the strong ones for propagation of information from the modeling experiment of the network relationship between networking and the entrepreneur orientation. They found that the informal network of personal dimension did not have relations with the entrepreneurial existence and growth at all, however, the formal network such as external accountants and related industrial associations had correlation with the entrepreneurial existence and growth. In this way, the enterprises are able to take advantages like innovation through the networking with the major economic firms, reducing uncertainty (Dess & Starr, 1992), obtaining the rights for the entrepreneurial management (Starr & MacMillan, 1990), Information exchange and

adjustment (Larson, 1991), know-how and increasing the pace of technology transfer (Jarillo, 1988; Powell, 1990), and etc.

Looking into the domestic researches which researched on the relationship between the networking and corporate performance, Park Sang Moon (1995) observed that getting advantage actively of the external resources could provide the new opportunity for the venture enterprises. Also, he insisted that the active use of the external resources can have effects on the entrepreneurial performance for the venture business since it lets the enterprises to get the profits such as information about the competitive enterprises, the formation of new customer, and etc. Jung Seung Wha and Lee Kyoung Mook (1996) stated on the logic of cooperation that the organic networking lets the selected groups to gather up their insufficient ability to help each other. Kim Dong Hee (2001) stated on the research which targeted the Internet business that the network size have similar effects on the entrepreneurial performance. Won Jong Wha and Lee Do Wha (2001) insisted that the source of networking and trust are related on the business performance. The entrepreneurial performance will be rising if networking source and trust should be formed firmly but not in the case of the wide relations with the networking source in amount. Lee Hyun Sook and Lee Jang Woo (2004) presented that the trust on the network sources and the sizes of networks have correlations and the entrepreneurial network have good effects on the business performance. Na Jong Duk and Kim Seung Hoo (2004) clarified that the core competence affects on not only the performance but also the correlated networking. In addition, they found that the correlating network roles as a intermediate in the relationship between the core competence and performance. Therefore, this research sets the hypothesis below followed by the preceding research results and the purpose of this research is to prove the relationship of network activity and cooperating performance of Korea and Chinese small business for comparison.

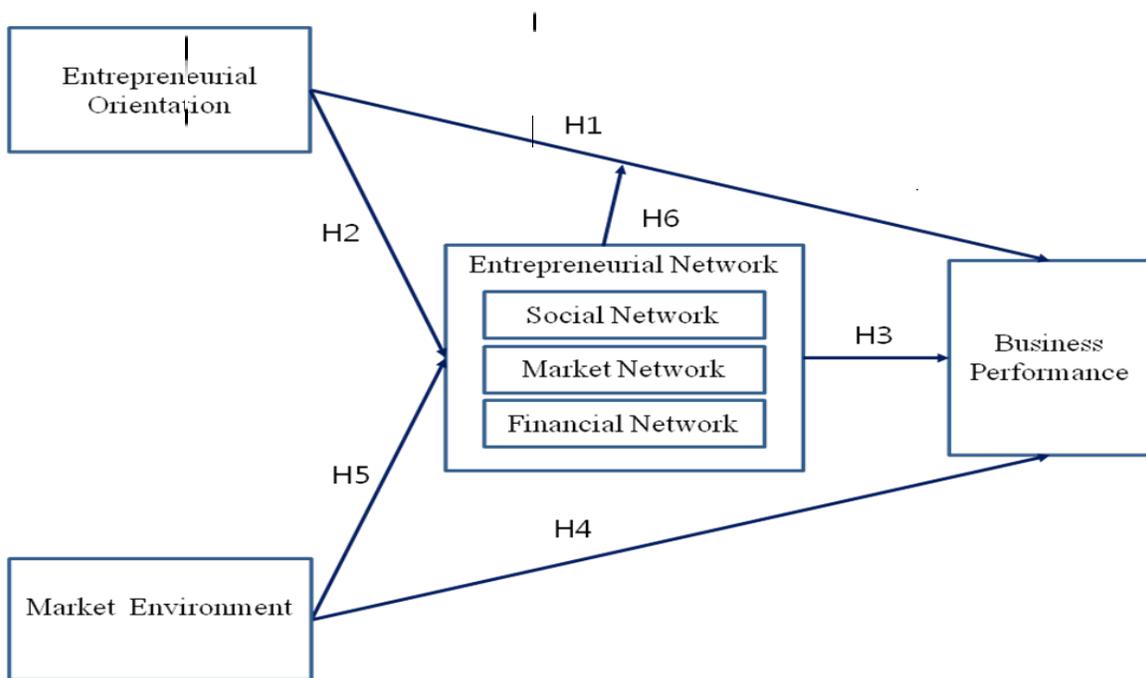
IV. Research Design

4.1. Research Model and Hypothesis

The purpose of this research is to analyze the impacts of the entrepreneurial orientation, market environment, and CEOs' networking on business performances. The active use of the external resources leads the venture enterprises to create new opportunities and it can affect on the entrepreneurial performance for venture enterprises since it provides the benefits of giving information of the competitive enterprises and having new customers. The networking source and trust are related with the business performance. The entrepreneurial orientation and environment affect not only on the business performance but also on the correlating networking directly at the same time. Also, this correlation on the entrepreneurial orientation and environment act as the connections between those ones. Therefore, this

research set the under-mentioned hypothesis based on the preceding research results and is trying to prove the relation between the network activities and the business performances by observing the small business, especially on the BI.

The support for BI could be differentiated by the active requests and relations of tenant firms as the service which provided by BI. The innovative and positive entrepreneurs are more interested in starting up companies' networking. That means that starting up networking can be differentiated by CEOs' entrepreneurial orientation and market environment. This seizes the fact that three factors can have effects on the entrepreneurial performance and is trying to prove the hypothesis 1-6 shown in <Figure 1>



<Figure 1> Research Model

To test the research model centered on entrepreneurial network, we generate 6 hypotheses below.

- H1: Entrepreneurial orientation has positive effects on business performance.
- H2: Entrepreneurial orientation has positive effects on entrepreneurial network.
- H3: Entrepreneurial network has positive effects on business performance.
- H4: Market environment has positive effects on business performance.
- H5: Market environment has positive effects on entrepreneurial network.
- H6: Entrepreneurial orientation has more effects on performance with more entrepreneurial network.

4.2. Research Method

1) Data Collection

In this research, we use 269 tenant firms as a sample in nationwide university Business Incubator. Among these groups, BI tenants and the graduates are included. The contents of the survey were consisted of entrepreneurial orientation, market environment, and business performance. The research period was for about a month from October 2, 2008 to October 21, 2008. The progress of data collection was requested to KOBIA which sent e-mails and letters or visited the sites. CEO and the staffs in the firms were the respondents. The survey sent through e-mails to 269 nationwide universities BI were spread over and we received total number of 138 which include 74 CEO, 64 staffs. We analyzed 127 data sets with the exception of the survey of 6 CEO and 5 staffs, which included the response of 68 CEO and 59 staffs. Entrepreneurial orientation, support of BI, market environment and performance are measured with 5 points Likert scale. We test hypotheses through the regression analysis where the performance was set as a dependent variable and entrepreneurial orientation, market environment factor, support of BI were set as independent variables. The variables are obtained by factor analysis and basically the correlation analysis is included. All the statistical analysis is executed using SPSS 11.0.

2) Measurement

(1) *Entrepreneurial orientation*: As Miller (1983) suggested, we use risk taking, innovativeness, and Proactiveness, revising the measure that Naman, Slevin (1993), Covin and Slevin (1989) and others used. In this study, entrepreneurial orientation has two factors: innovativeness and proactiveness. Total explanations of these two factors were 63.937%. Cronbach's α of each is 0.822 and 0.783.

(2) *Market Environment*: We construct market environment variables based on works by Zahra (1996) and Oh et al.(2002). The questionnaire has 5 questions consisting of the proper characteristics of the market such as maturity and growth or change. Factor analysis results in 2 factors: Maturity and growth. Total explanations of these two factors were 76.453%. Cronbach's α of each is more than 0.79.

(3) *Entrepreneurial Network*: The network activities composed three variables of the networking size, networking frequency (the number of times it contacts), and networking trust. The size of the networking was based on 15 resources – family/ relatives, friends/coworkers/ supervisor, experienced person in starting up business, professors/university researchers, venture capital/private investor, banks/financial institutions, lawyers/ accountants, specialist and managing consultant, government/government offices, cooperation companies, competition companies, the suppliers/business connection, users/customers,

foreigners and so on. About each of these 15 resources, for the case of the recent contact number of once in one or two years, the total number of resources which treated 1 for each resource regardless of frequency was set as the size of networking. Respondents should have answered the networking frequency divided into none, few (1-3 times a year), normal (over 4 times a year and less than once in a month), several (more than once in a month), and many (more than once a week) and the frequency for a year was calculated. For example, 1-3 times a year was calculated as two times, over 4 times a year and less than once a month was set as 8 times, and more than once a week was treated as 52 times. And the average of these numbers set as the frequency. The respondents' answer for 'Networking trust' followed 5 points Likert scale (1 = no trust, 5 = highly trust) and the average of these was set as the trust on the networking resource. The result of analyzing causes showed that these categories were combined into three factors which was market network, accountants/experts network, network, social network and a value (Cronbach's α) was 0.95.

(4) *Business Performance*: The measurement of the business performance can be done with both the subjective evaluation and the objective evaluation or used only one (Greenley & Foxall, 1998). The representative objective indexes, ROI, the business profit, sales, the ratio of market share, etc, are in use. It made difficult for enterprises to compare each other. The many researchers try to measure performance by applying the subjective evaluation (Narver & Slater, 1990; Kohli et al., 1993; Hart et al., 1993; Greenley, 1995). And Business performance has 4 items as one factor, the total explanation power was 77.308%. Cronbach's α is 0.902.

V. Results

To test the first three hypotheses (H1, H2, H3), path analysis based on regression is conducted. The effects of entrepreneurial orientation on entrepreneurial network and business performance are significant as <Table 2> shows.

<Table 2> Entrepreneurial orientation and mediating effect by Entrepreneurial Network

Dependent variable		Independent variable	B	SE	β	t	R	R ²
CEO Network	Frequency	(Constant)	2.452	.372	-	6.592		
		Market Network	.360	.108	.410	3.319**	6.524**	.172
		EO- Risk taking	-.230	.090	-	-2.551*		

		.315						
	Financial Network	-	-	-	-	-	-	-
	Social Network	(Constant)	2.224	.492	-	4.518**	6.423*	.091
		Market Environment	.333	.131	.302	2.534*		
		(Constant)	2.413	.330	-	7.322**		
	Market network	EO-Proactiveness	.421	.096	.513	4.384**	10.193**	.242
		EO- Risk taking	-.205	.079	-.306	-2.612*		
		(Constant)	2.111	.444	-	4.754**	5.929*	.084
	Financial network	EO-Innovativeness	.289	.119	.289	2.435*		
		(Constant)	2.032	.540	-	3.765**	9.481**	.127
	Social network	Market Environment	.438	.142	.357	3.079**		
	Size		-	-	-	-	-	-
		(Constant)	.732	.429	-	1.707		
		Market Environment	.396	.103	.404	3.831**	15.546**	.433
	Business performance	EO-Innovativeness	.199	.093	.230	2.134*		
		Financial network –trust	.220	.088	.255	2.511*		

*: p< 0.05, **: p< 0.01, ***: p< 0.001

Market environment, entrepreneurial orientation (innovativeness), and trust in financial/professional network has positive effects on business performance. So the H1, H3, H4 are partly supported. There are mostly different antecedents of entrepreneurial network. For instance, frequency of market network is influenced by ‘Proactiveness’ among factors of entrepreneurial orientation. Market environment has positive effect on frequency and trust of social network. Innovativeness has been related with trust in financial network. So hypothesis 2, 5 are also partly supported.

The relationship between entrepreneurial orientation, entrepreneurial network, and business performance has been shown as <Table 3>. The moderating effect of entrepreneurial network is hardly found out.

<Table 3> Moderating effect of entrepreneurial network

Variable		Model 1		Model 2		Model 3	
		B	β	B	β	B	B
(Constant)		1.049	-	.472	-	1.256	-
Independent variables (A)	Market environment(A1)	.453	.462**	.400	.408**	.207	.211
	Innovativeness(A2)	.264	.299*	.215	.244*	.169	.192
	Proactiveness(A3)	-.033	-.044	-.088	-.117	-.012	-.016
	Risk-taking(A4)	.023	.038	.048	.078	.044	.072
Moderating variables (B)	Market network (B1)			.157	.172	.027	.030
	Financial network (B2)			.126	.143	.191	.217
	Social network (B3)			.042	.053	.046	.058
A×B	A1×B1					.079	.076
	A1×B2					-.170	-.152
	A1×B3					.103	.099
	A2×B1					.212	.183
	A2×B2					-.271	-.247
	A2×B3					-.119	-.124
	A3×B1					.153	.140
	A3×B2					.180	.206
	A3×B3					.004	.006
	A4×B1					.056	.069
	A4×B2					-.014	-.023
A4×B3					.053	.090	

F	10.274**	7.500**	3.464**
F Residual		2.685	1.058
R ²	.399	.471	.583
Adj-R ²	.360	.408	.415
R ² Residual		.072	.113

To test the moderating effect of entrepreneurial network on the effect of entrepreneurial orientation on business performance, we conducted stepwise multiple regression analysis with and without controlling effects of market environment. We couldn't find out any significant effect of moderation. Although the outcomes don't support H6, they reinforce the test of effects of entrepreneurial orientation on business performance. We tested the moderating effect (A×B) with factor by factor. So there was no support for the last hypothesis. The significant results are simply summarized in Figure 2.

VI. Discussion and Conclusion

This study has several academic and practical implications centered on the role of entrepreneurial network on business performance. Entrepreneurial orientation, market environment, entrepreneurial network and performance have significant associations in the statistical analysis. Entrepreneurial orientation and market environment have positive effects on business performance and show somewhat significant effect on entrepreneurial network. Finally the entrepreneurial network has significant effect on business performance though it doesn't moderate the effect of entrepreneurial orientation and market environment on the performance.

Most important contribution of this research is to test the antecedents and performance of entrepreneurial network. We had test three kinds of entrepreneurial network: market network, financial/professional network, and social network in intensity and quality sense. Frequency of entrepreneurial network(ing) and the resultant trust on entrepreneurial network are included to verify their importance. Empirical evidences show that intensive and trusted networks could help tenant firms achieving performance through entrepreneurial activities. Additionally this research shows that entrepreneurial orientation and market environment have positive impact on firm performance. The level of networking of CEOs and its interaction with entrepreneurial orientation and market are critical factors to help the start up companies get the efficient resources to get intended performances. This research can contribute for business incubator managers to think about their assistance and intervention to

tenant firms having effective networks in 2x3 dimensions as well as for entrepreneur to create and utilize his or her network to realize the potential value in the dispersed resources.

Reference

- Buss, D.(1977), “Bringing New Firms out of Their Shell,” *Nation’s Business*, Vol. 85(3), pp. 48-50.
- Bahn, Sung-Sik, Sanggu Seo, Hyunsuk Lee, Yong-Sam Lee, Min-Seok Cha (2008), " Entrepreneurial Orientation, Market Environment, Involvement of Business Incubator, and Business Performance, *Innovation in Management Practices*, Macmillan India Ltd.pp. 162-171
- Barney, J.(1986), “Strategic factor market: Expectations, luck and business strategy”, *Management Science*, Vol.32 ,pp.1512-1514.
- Barney, J.(1991), “Firm resources and sustained competitive advantage”, *Journal of Management*, Vol.17, No.1, pp.99-120.
- Coleman, J. S.(1988), “Social Capital in the Creation of Human capital”, *American Journal of Sociology*, Vol.94, pp.95-120..
- Covin, G. J., T. Covin and D. P. Slevin(1989), "Strategic Management of Small Firms in Hostile and Benign Environments", *Strategic Management Journal*, Vol.10(1), pp. 75-87.
- Covin, G. J., T. Covin and D. P. Slevin(1991), “A Conceptual Model of Entrepreneurship as Firm Behavior,” *Entrepreneurship:TheoryandPractice*,Vol.16(1), pp. 75-87.
- Dollinger, M. J., Golden, P. A. and T. Saxton(1997). “The Effect of Reputation on the Decision to Joint Venture,” *Strategic Management Journal*, Vol.17, pp. 55-84.
- Gomes-Cassere, B.(1994), “Group Versus Group: How Alliance Networks Compete” ,Harvard Business Review,Vol.72, No.4, pp.62-74.
- Granovetter, M. S.(1982), “The Strength of Weak tie: N Network Theory Revisited”, in P.V. Marsden and Lin(eds.), *Social structure and Network Analysis*, pp. 105-130, BerverlyHills,CA:Sage.
- Greenley, G. E.(1995), “Market Orientation and Company Performance: Empirical Evidence from K Companies,” *British Journal of Management*,Vol.6, pp. 1-13.
- Greenley, G. E. and G. R. Foxall(1998), “External Moderation of Association among Stakeholder Orientations and Company Performance,” *International Journal of Research in Marketing*, Vol.15,pp.51-69.

- Hamel, G.(1991), "Competition for Competence and Inter-Partner Learning within International Strategic Alliances", *Strategic Management Journal*, Vol. 12,pp.83-103.
- Hansen, E. L.(1995), "Entrepreneurial Network and New Organization Growth, Entrepreneurship", *Theory and Practice*, Vol. 19, Summer, PP.7-19.
- Hart, S. and A. Diamantopoulos(1993), "Linking Market Orientation and Company Performance: Preliminary Work on Kohli and Jaworski's Framework," *Journal of Strategic Marketing*,Vol.1, pp.93-122.
- Herron, L.(1992), "Cultivating Corporate Entrepreneurs," *Human Resource Planning*, Vol.13(4),pp.3-15.
- Hunt, S. D.(2000), *A General Theory of Competition: Resources, Competences, Productivity, Economic Growth*, Sage Publications, Inc. Jarillo, I. C.(1988), "On strategic networks", *Strategic Management Journal*, Vol. 9, pp.31-34.
- Kogut, B. and Zander, U.(1992), "Knowledge of the Firm, Combinative capabilities, and the Replication of Technology", *Organization Science*, Vol. 3, pp.383-397.
- Larson, A.(1991), "Partner networks: Leveraging external ties to improve entrepreneurial performance", *Journal of Business Venturing*, Vol. 6,pp.173-188.
- Lumpkin, G. T. and G. G. Dress(1996), "Clarifying the Entrepreneurial Orientation Construct and Linking it to Performance," *The Academy of Management Review*,Vol.21(1), pp. 135-138.
- Miller, D.(1983), "The Correlates of Entrepreneurship in Three Type of Firms." *Management Science*, Vol.29(7),pp.770-91.
- Naman, J. L. and D. P. Slevin(1993), "Entrepreneurship and the Concept of Fit: A Model and Empirical Tests," *Strategic Management Journal*,Vol.14(2), pp.137-153.
- Narver, J. C. and S. F. Slater(1990), "The Effect of a Market Orientation on Business Profitability," *Journal of Marketing*, Vol.15, pp. 137-146.
- Oh, H., S. Lee, and M. Park (2002), "A Study on Technology Development Strategy and Performance in IT ventures," *Korean Management Review*, Vol.31(4),pp.881-906.
- Powell, A.(1990), "Neither market nor hierarchy: Network forms of organization", *Research in Organizational Behavior*,Vol.12,pp.295-336.
- Prahalad, C.K. and Hamel, G.(1990), "The Core Competence of the Corporation", *Harvard Business Review*, May-June, pp. 79-91
- Rangone, A.(1999), "A resource-based approach to strategy analysis in small-medium sized enterprises", *Small Business Economics*, Vol. 12, pp.233-248.

- Rumelt, R. P.(1984), "Toward a strategic theory of the firm", In R. Lamb(ed.), *Competitive Strategic Management*, pp. 556-670. Englewood Cliffs, NJ:Prentice-Hall.
- Rumelt, R. P.(1987), "Theory, strategy, and entrepreneurship", In D.J. Teece (ed.), *The Competitive Challenge*, pp. 137-158, Cambridge, MA:Ballinger Publishing.
- Starr, J. A. and MacMillan, I. C.(1990), " Resource cooptation via social contracting: Resource acquisition strategies for new ventures", *Strategic Management Journal*,Vol.11,pp.79-92.
- Watson, John(2006), "Modeling the relationship between networking and firm performance", *JournalofBusinessVenturing*,doi:10.1016,pp.1-6.
- Wernerfelt, B(1984), "A Resource-based view of the firm", *Strategic Management Journal*, Vol.5,pp.171-180.
- Yang, Mayfair M.(1994), *Gifts, Favors, and Banquets: The Art of Social Relationships in China*, Cornell University Press. p.49.
- Yu, T. F.(2001),"Toward a capabilities perspective of the small firm", *International Journal of Management*,Vol.3,No.3,pp.185-197.
- Zahra, S. A.(1991), "Predictors and Financial Outcome of Corporate Entrepreneurship: An Exploratory Study." *Journal of Business Venturing*, Vol.6, pp. 259~285.
- Zott, C.(2003), "Dynamic capabilities and the emergency of intraindustry differential firm performance: Insights from simulation study", *Strategic Management Journal*,Vol.24,pp.97-125

Factors on Small Service Business Performance -Focused on Hairdresser's -

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This paper aims to examine factors affecting small service business performance, especially hairdresser's sales which are assumed to be dependent primarily on its outskirts' residents. In contrast to the prior research, this study measures sales amount as a business success factor rather than business man's satisfaction level or customers' royalty and also considers several location traits as a separate service business success factor without including the factor in management factors.

The empirical research has been by interviewing 111 hairdressers' president and their results from SPSS 12.0 k. show that hairdresser's sales can be determined significantly by education, age and the field experience in entrepreneurs' background features.

Public and commerce facilities, which are acquired from the market information system on Korean Small and Medium Business Administration website in order to get objective data, describe a floating population of hairdresser's outskirts and can significantly impact its sales

Track: 14. Other SME Related Issues

ASIAN SME BUSINESS DOCTORAL RESEARCH OUTCOMES

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ABSTRACT

The paper documents Doctoral research undertaken by graduates of the Graduate College of Management of Southern Cross University in Australia, as they proceeded to research programs to meet the requirements of the Doctor of Business Administration or Doctor of Philosophy Awards. Up to the end of 2008, more than 250 candidates have graduated in fields of management and a relatively high proportion of these graduates either focused completely on some aspect of small enterprise management or used small enterprises in Asia in their fields studies towards the research degree. A small enterprise is defined as one owned and controlled by a few entrepreneurs often members of the same family. Small enterprises tend to have a relatively small share of the market but collectively are most significant in their contribution to national growth and development.

The importance of small enterprises is documented and doctoral research outcomes which focus on the characteristics of small enterprises and their owners, various functional areas of management such as finance, marketing, human resource management and systems and factors which influence success in these functional areas, small enterprise growth and development and strategies, management style and success in the small enterprises are reviewed and finally, small enterprise policies which have been or may be adopted by national governments and organizations to support the growth and development of small enterprise are examined. The paper ends with a review of future directions of doctoral research on aspects of small enterprise management in Asia.

Emeritus Professor Geoffrey G. Meredith AM, PhD, Graduate College of Management, Southern Cross University, NSW, Australia, has undertaken research on aspects of small enterprise management for many decades and has published books and articles in the areas. He is a Wilford White Fellow of the International Council of Small Business and was admitted as a Member of the Order of Australia (OM) in recognition of his work on small enterprise management.

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program.. He is the author of many books and journal articles in the field of management.

Introduction:

Small enterprises are those which are owned and controlled by one or two people – frequently, members of the same family. These enterprises generally command a relatively small share of the total market in any country and yet dominate enterprises in a country from the point of view of numbers – Table 1 below indicates that in general, about 98% of enterprises in most Asian countries are classified as small enterprises. Given this factor alone, it would be expected that doctoral research in business and management in Asia would feature small enterprise operations and management. The purpose of this paper is therefore to:-

- In brief emphasise the importance of small enterprises in Asia from the point of view of significance and contribution of the group to national economies and development.
- Identify research areas associated with small enterprises which have been a feature of doctoral research output.
- Summarise what doctoral research output has had to say about the characteristics of small enterprises and factors influencing functional management of those enterprises.
- Comment on potential future directions of doctoral research on aspects of small enterprise management in Asia.

The paper begins by examining characteristics of small enterprises and an overview of the contribution and significance small enterprises in Asia, to demonstrate the importance of the group within each nation. Output from doctorate research is reviewed with comments on what this output has had to say about the characteristics of small enterprises, success in functional management of small enterprises including financial management, human resource management, information systems and marketing, followed by a review of the doctoral research output on small enterprise

growth and development strategies and small enterprise policies with the final section examining potential future directions of doctoral research for Asian small enterprises.

Significance and contribution of small enterprises in Asia:

Universally it is recognized that small enterprises are established by and operated by entrepreneurs – those individuals who identify opportunities in the environment, establish targets and achieve those targets while accepting risk associated with their activities. These entrepreneurs establish their small enterprises in every field of endeavour – retail, service industry, manufacturing as well as agriculture sectors. The extent of small enterprises in selected Asian countries are set out in Table 1 below which indicates an estimate of non-agricultural enterprises as well as the percentage which these small enterprises represent all enterprises in the 1990's.

Table 1.

Non-agricultural SBE's in some Asian nations.		
Country	No. of SBE's 2002	SBEs as % all enterprises (1990's)
China	8000000	99
H.K. China	292000	98
Indonesia	17000000	98
Japan	6200000	99
Sth Korea	2700000	99
Philippines	820000	99
Singapore	54000	91
Thailand	350000	96

Source: APEC (2003) and national data

Universal recognition also of the significant contribution small enterprises make to national economies is accepted in the following terms:.

- Enterprises contribute heavily to total employment in any nation – frequently representing more than 50% of total employed.
- Total output is also a feature of small enterprises – it is not unusual for more than 50% of a nation's output to originate from small enterprises.

- Exports are also contributed by many small enterprises whether in the manufacturing, service or agricultural sectors.
- An important social contribution of small enterprises is the range of products and services directly available to the consuming public – in many countries, consumers rely on the output of small enterprises for the maintenance of standards of living.
- Small enterprises also produce specialist services and specialist products often in a more efficient manner than would be feasible by large enterprises.
- Contributions to the support of large forms come from small enterprises with services and products required by those large enterprises in their production processes. Thus in many countries producing automobiles for example, hundreds of small enterprises contribute by way of services and parts to the production process.
- Small enterprises also have a role in becoming distribution outlets for large firms – whether those firms are producing high technology or consumer products, frequently small enterprises are associated with the distribution process to eventual consumers.
- There is general recognition that small enterprises represent a breeding ground for new business ventures often leading to large enterprises and high technology enterprises.
- Competition in most nations or economies are created by the multitude of small enterprises providing services and products.

Finally, it can be argued that small enterprises create an avenue for independent, innovative and entrepreneurial talents.

With this brief overview, it is self evident that governments in Asian countries respect and recognize the important role of small enterprises and their managers and owners to national economies. It is to be expected therefore that research in business and management in Asia would feature some aspect of small enterprise management.

Characteristics of small enterprises and their owners/managers:

It would be expected that any research examining aspects of small enterprise management performance, would to some extent touch on characteristics of those enterprises and perhaps characteristics of owners and managers. A selection of research outcomes from DBA theses are reviewed to reveal what characteristics of enterprises and managers arose from past research at the doctoral level in Asia.

A study of small enterprises in Indonesia resulted in the doctoral thesis: **Migrant and local entrepreneurial business networks**. The objective of the research was to examine factors influencing migrant and local entrepreneurial business networks in Indonesia. These factors included a range of influences, but the key as far as this paper is concerned, is that some factors represented entrepreneurial personal characteristics as well as some characteristics of enterprises such as support networks, business focus and market accessibility. A literature view which drew on research over several decades on personal characteristics of small enterprise owners, included self confidence, initiative taking, acceptance of responsibility, resourcefulness, innovation and creativity, initiative – taking, independence, leadership, need for achievement, desire for responsibility, preference for moderate risk, stimulation by feedback, future orientation, skills in organizing, and positive attitudes towards money and funding. The thesis also identified some characteristics of enterprises including marketing accessibility, capital accessibility, the importance of business focus and the influence of economic conditions on business success. The

conceptual model developed for the research suggested that entrepreneurial personal characteristics and initiatives as well as key enterprise characteristics had a significant impact on entrepreneurial business networking which influenced enterprise success and joint venture success. To test these concepts, a survey of some three hundred entrepreneurs in one Indonesian Province was included in the study. The outcome of this survey was to demonstrate that personal characteristics and initiatives taken by entrepreneurs were significant in influencing success as were also such characteristics as enterprise market accessibility and capital accessibility. The outcome of the research was significant in terms of government policy and local attitudes towards joint ventures associated with migrant and local entrepreneurs.

In 2005, research in Singapore in the service industry involving small enterprises and their staff in the food and beverage industry produced the thesis: **Measuring service quality performance in the food and beverage industry**, which examined characteristics of small enterprises as restaurants in their performance and also the attitude of staff serving customers in those restaurants. The qualities examined in the research included tangibility, reliability, responsiveness, assurance and empathy – the characteristics were measured based on responses to a survey of customers as well as a survey of management and staff. Output compared these five characteristics for dimensions of service in terms of importance as ranked by customers, by management, by other staff within the restaurant. The study used a instrument referred to as the SERVQUAL model, and applied this to the food and beverage Industry to determine the quality of service, in particular, attitudes of customers and staff to service quality. Thus, the research demonstrated many characteristics of successful enterprises in the food and beverage Industry in Asia. The research had obvious implications for the industry, for government, for training institutions associated with the food and beverage Industry and for potential entrepreneurs. The

research concluded with a conceptual model for improving service performance in the industry covering planning, implementation, and control leading to improvement in performance.

A research study in Thailand looked at factors influencing consumer purchase of service products and although the research focused on consumers, the study also examined the qualities and characteristics of enterprises providing services to consumers. The thesis: **Factors influencing consumer purchase of service products** – examined factors based on a literature review from which was developed a theoretical framework leading to the establishment of research problems and questions. The framework and the problem and questions were then evaluated with a survey of consumers and their approach to enterprises offering insurance policies in Thailand. The study therefore examined in detail what is regarded as a service industry, and the products available from service industries and how owners of those enterprises offering products, marketed and delivered their products for potential consumers. Thus, the study touched on characteristics of enterprise owners and the characteristics of service enterprises in Thailand. and came up with a number of recommendations including implications for government in its dealing with enterprises in the service Industry, implications for Industry enterprises and the organizations controlling those enterprises, as well as implications for consumers and future academic research. The doctoral study therefore provides a very useful summary of service sector enterprises which operate as small enterprises in Asia.

A different subset of small enterprise and their owners was examined in doctoral research in Malaysia. As the research points out with documented evidence from Malaysia, SMEs form the backbone of the Malaysian manufacturing sector in terms of number of establishments as well as number of employees. The study examined a

problem in Malaysia whereby manufacturing SMEs could be seen as meeting the demands of a local consumer group as well as the needs of larger manufacturing enterprises in the country however, as the researcher points out, frequently large Malaysian manufacturers gain supplies from overseas because of the low quality achievement of local SMEs. The study therefore looked at the mindset of small enterprise owners who could meet quality standards and also examined the actual practices that successful SMEs possessed and implemented in meeting the quality demands of large manufacturers. The research problem was therefore to examine the most appropriate quality model that could be used by SMEs in Malaysia in the manufacturing sector in order to meet the quality demands of large manufacturing customers and large manufacturers on a global basis. The study therefore looked at attitudes of owners, approaches taken by SME owners to change current practices to meet quality demands, the role of government in this exercise, and attempted to measure the level of quality practices of successful SMEs. In chapter 2, the researcher examined SMEs in Malaysia with comments on attitudes, initiatives and structures and then went on to relate the development of quality management models to the needs of SMEs attempting to meet the requirements of customers. A conceptual theoretical framework was developed meeting acceptable global standards of quality management and these were modified to meet the needs of SMEs. The outcome of the research was to provide answers to four research questions listed, to produce specific recommendations on the development of quality standards and the researcher also suggested further research to extend the research in particular to major Malaysian ethnic groups .

The above four examples of doctoral research represent no more than a sample of research studies looking at the characteristics of enterprises and their

owners/managers. In reality, every research study into aspects of SMEs, touches on the importance of SMEs in Asian nations, the characteristics of the SMEs and some aspects of SME owner/manager characteristics.

Factors influencing growth and development of SMEs.

Many doctoral studies in Asia have touched on questions of SME growth and development including factors influencing such growth and development and how governments and industry organizations can assist such development. It is generally expected that as studies examined this area, characteristics of enterprises and characteristics of owner/managers would feature in the studies and therefore, some overlap exists between the doctoral outcomes examined below and outcomes illustrated from theses in the previous section.

In Malaysia, a research program focused on growth and development of SME manufacturers in an area around Penang: **A model for SMI transition to growth.**

The purpose of the research was to understand the characteristics and capability of entrepreneurs and the transformation process necessary to ensure growth of SMEs in Malaysia. The study was designed in the usual structure for doctoral research with an examination of the theory leading to a series of six research questions to be examined as a result of case studies of eight SMEs. The research questions featured:

- Leadership characteristics and mindset in transition of SMEs to growth stages.
- Entrepreneurial attributes and capabilities in transition to growth.
- Process, methodology and culture of SMEs that is necessary for transition to growth.
- Day to day managerial capabilities necessary in managing SME transition to growth.

- Impact the environment of SMEs have on entrepreneurial characteristics in transition to growth.
- Key success factors for SMEs to pursue global competitiveness.

The research output provided a theoretical background including characteristics of entrepreneurs with vision and strategic planning and capabilities of entrepreneurs to manage change, with a detailed review of a management transformation process for growth and competitiveness. Data was collected from eight case studies of SMEs in Malaysia assisted by a questionnaire which was meant to identify successful entrepreneurial attributes, capabilities and the process in achieving growth. Criteria built into the questionnaire included characteristics of entrepreneurial personality, experience, capabilities, management practices, products, target markets, financial considerations and potential environmental threats. A literature review produced a conceptual framework identifying processes whereby SMEs transit to growth from a start up position, with a second outline identifying factors contributing to transit to growth. These factors included entrepreneurial attributes, leadership mindset, managerial capabilities, operational processes, and moderating factors including market characteristics and management qualities.

A further research study in Malaysia undertook a review of a service industry – engineering services. The study looked at the question of globalization of engineering services by local as well as international engineering firms in Malaysia. The author, in his thesis: **Globalisation of engineering services: challenges for Malaysian consulting firms** – undertook a literature review to identify components of developing a competitive attitude by owners and managers and then from a theoretical framework, identified a research problem and research questions. The research problem was to examine the competitiveness of Malaysian Engineering

Consulting firms confronting globalization of services through a growth process. From this and the framework, the researcher developed three research questions: looking at the level of competitiveness, factors affecting competitiveness and changes expected within the service firms due to globalization. To test the model, the researcher prepared a questionnaire and distributed this to registered members of Consulting Engineers in Malaysia. Feedback from the questionnaires form the basis for a review of the research problem and research question. The study examined in detail, leadership, networking, competencies associated with skill and knowledge in examining the concept of competitiveness. This provided interesting insights into characteristics of small consulting firms and the approach taken by owners and managers of those firms. The research argued that influencing factors on this question of competitiveness, included competency, customer focus, leadership, networking and the impact of government regulations.

At some stage in their career development, entrepreneurs make a decision to establish or start up a new enterprise. A doctoral research study which examined the characteristics of entrepreneurs who intended to start up a new enterprise was undertaken in Singapore and the research produced a thesis: **Determinants of small business startup intention in 2005**. The researcher used as his field study, a group of students within a college of business and management, from the People's Republic of China. The research commenced with a statement of a problem: ***Identify factors which influence decisions leading to small business startup*** . A literature review was undertaken and six dependent variables identified as having direct impact on the ability and willingness of entrepreneurs to start up a new enterprise, referred to by the researcher as entrepreneurial capacity and entrepreneurial cognition. The six variables were: gender, family background, geocluster, entrepreneur status, education, and work experience. From this initial

review, the researcher developed a model which he referred to as entrepreneurial capital being made up of two components – social capital and human capital. The human capital included education and work experience while the social capital covered gender, family background, geocluster and entrepreneurial status. The researcher saw entrepreneurial capacity as representing five fundamental management competencies: vision, strategic planning, leadership and associated communications with people, operations, resources, and strategies. Entrepreneurial cognition refers to what entrepreneurs use in making assessments, judgements and decisions and involves opportunity evaluations, venture creation and hopefully venture growth. The research model indicates that researcher intended to measure linkages between social and human capital, entrepreneurial capacity and cognition and the final startup intention with an additional influence from enterprise education.

An evaluation of the model with data from a group of international students was completed, and based on the data analysis, the research model was modified to strengthen key aspects of social and human capital in the influence on entrepreneurial capacity and cognition and hence small business intention. Highlights of the outcome were:-

- The main path of small enterprise startup intention became social capital influencing entrepreneurial cognition and hence small enterprise startup intentions with a major emphasis placed on the first two components being social capital and entrepreneurial cognition.
- Entrepreneurial capital and entrepreneurial education are seen as the foundations supporting entrepreneurial capacity / cognition in starting new ventures.
- Entrepreneurial cognition is the most important concept for business startup intentions.

- A high proportion of female students indicated that they intended to start up a new enterprise within five years and the influence of parents on students was focused on male rather than female students.

The study concluded with implications in terms of development of economies, career choice for potential entrepreneurs, selection of education and educational institution, and importance of social capital in the business startup decisions. Hence, there were implications for industry, government, tertiary institutions, as well as individual entrepreneurs.

A final example of doctoral research focusing on future strategies, growth and development, is research undertaken and completed in 1999. The research produced a thesis: **Strategic pathways toward sustainable competitive advantage.**

Data for the field study was selected in Indonesia – the researcher prepared a questionnaire based on the research problem “What are the strategic routes towards sustainable competitive advantage?” and from the theory, the questionnaire was developed to evaluate a research model and a census technique for collecting data was employed involving over 500 financial institutions in Central Java, Indonesia. Questionnaires were sent to senior managers of each institution and over 200 completed questionnaires were available to the researcher to analyze data and test his research model. From the literature, many variables were identified which produced enterprise strategic instruments including specific resources of the enterprise, specific organizational capacities, environmental strategic factors and competitive market orientation. These in total identified whether the enterprise had a specific advantage in the marketplace which in turn affected company performance and hence sustainable competitive advantage.

The outcome of the research led to support for a number of hypotheses, and this support can be stated as follows:

1. An enterprise will strive for a stronger place in its differential position by effectively employing its resources and capabilities – specific resources and specific organizational capabilities.
2. In a competitive market, an enterprise will strive to balance the external and internal factors to sustain its performance by taking into consideration environmental pressures and supports and directing attention to the customer instead of competitor in a strategy formulation process.
3. An enterprise strategic objective can be stated as to generate a long term viable position through enhancing enterprise specific advantage, improving its marketing activity base performance, and enhancing the sustainability of competitive advantage.

The researcher concluded with implications of the research for managers, organizations, government and teaching institutions and finally recommended further research to strengthen the outcome of the study.

The four examples of DBA research quoted above, do no more than illustrate the number of research programs which focused on small enterprises, growth and development factors in Asia.

Management style and success

In examining characteristics of small enterprise owners, researchers generally touched on questions of management style and factors that influence success of managers. In this section, some examples of other DBA theses which focused on various aspects of management style and management success are reviewed to illustrate areas of small enterprise research based on DBA theses from Southern Cross University.

One project looked at questions of leadership within small clothing enterprises in Hong Kong in 2001. The examination of leadership was linked to quality

management and the impact on employee satisfaction. The objectives of the research study were to investigate-

1. leadership behaviour at different levels of an enterprise within the Hong Kong clothing industry.
2. the effect of a range of leadership styles on quality of management practice.
3. the effect of quality of management practices on performance and employee satisfaction.
4. the effect of a range of leadership practices on employee satisfaction.

As for other studies looking at aspects of small enterprise, the researcher presented an evolution of the Hong Kong textile industry over a number of years and its performance in terms of output, exports, number of establishments and employment. Within the industry in Hong Kong, the researcher carried out data collection through surveys and also multiple case studies. The survey was adapted from an instrument used to identify leadership styles at various levels of management within enterprises. The survey was supported by case studies resulting from interviews with four (4) entrepreneurial owners within Hong Kong. The research outlined and supported the methodology developed for the research – both survey and case method.

In chapter 1, the researcher defined leadership as an individual's personality, character, competence and approach in managing issues, problems and decisions relating to particular tasks. Transformation leadership is seen to have four qualities – idealized influence, intellectual stimulation, inspirational motivation and individualized consideration. These are the factors the researcher examined in his study within the Hong Kong clothing industry.

Based on an analysis of data from the survey and case study interviews, the researcher concluded:

1. Leaders exhibit more transformational leadership when they are at senior positions of an enterprise rather than at a secondary or lower levels. At this senior level, leaders display intellectual stimulation, and significant idealise influences.
2. Leaders at a manager (lower level than senior positions in the enterprise) exhibit more transactional leadership than at other levels.
3. Leaders in organizations that implement quality management practices tend to be transformational in their leadership styles.
4. Concepts of management by exception and laissez-faire leadership are seen as undesirable.
5. The impact of a range of leadership styles on performance improvement and employee satisfaction was not consistent.
6. In quality management implementation, quality awareness and in-house practices stand out to be more conspicuous to performance improvements and employee satisfaction than other elements.

The researcher concluded by looking at the implications of the study for various groups within Hong Kong and suggested further research in the general area of leadership.

A study which examined the broad area of human resource development and policy associated with development was undertaken in 1999 using the electronics industry of Malaysia as a basis for field study review of a theoretical framework.

The thesis: **Enhancing technological capabilities in the Malaysian indigenous Electronics Industry**, had as its research problem: "How can human research development policy approaches contribute to enhancing technological

capabilities in the electronics industry for sustainable competitive advantage?" with a series of research questions reviewing appropriate national technology policy, appropriate approaches at the enterprise level for successful technology fellowship strategies, responses of employees to national incentive schemes in human resource development, ways to strengthen vocational and educational systems and finally, measures required to increase total productivity in the electronics industry.

Technology in the research was defined as accumulated knowledge required for better manufacturing of final products or processing of immediate inputs; while human resource development was defined as the planned continuous effort by management to improve employee competency levels and organizational performance through training, education and development programs.

Research methodology involved the use of focus group meetings to collect sensitive information in the electronics industry in Malaysia and in depth case studies which allowed careful examination of complex situations within the industry.

The thesis placed emphasis on national technology policy for Malaysia, enterprise technology strategies that could be adopted by entrepreneurs, approaches to the development of technological capabilities including attention to skilled labour supply and productivity and examination of factors that provide global competitive advantages to enterprises in the electronic industry which adopt and apply appropriate technologies. Looking at management styles and success of management, five research propositions were examined covering national technology policy, enterprise technology strategies, enterprise training, vocational and educational training, and global comparative advantages. From the data collected through focus groups and case studies, conclusions were reached on

each of these research propositions, and implications for Malaysia – in particular policy in the Government and private sectors, were elaborated.

From Vietnam, a research project examined information gathering and use of information by small enterprise owners and the process, commented on management style and enterprise success or at least the implications for these areas. The thesis: **Business environmental scanning practices and SME performance**, was submitted in 2001 and the researcher examined various types of information collected by entrepreneurs, methods of collection, and use of information in business decision making. Thus, the thesis provided some insight into management styles linked to information and enterprise success. For purposes of the research, business environmental scanning was defined as gathering and using information about events, trends and changes in an enterprise's external environment, the knowledge of which assists owners and managers in enterprise decisions. The need to find and collect such external information is a reflection of the attitudes of owners and managers and hence this area of small enterprise research is relevant in looking at management styles and success in Asia. This thesis and its research outcomes is referred to also in the following section dealing with functional and technical procedures adopted by owners and managers of small enterprises in Asia.

Management techniques and procedures

A significant contribution to research on SMEs is any examination and review of management practices adopted by entrepreneurs as they negotiate competitive environments. Strategies may include financial management strategies, strategies associated with marketing, human resource development, systems development, exporting or importing strategies or the equivalent. Given the commonality of

financial management within all SMEs, it is to be expected that a number of doctoral studies may focus on this area and two examples are reviewed below – from Vietnam and Indonesia. Comment has already been made on SME use of information .

In 2001, a researcher submitted a thesis: **Financial management and profitability of small and medium enterprises – data collected from small enterprise owners in Vietnam.** The objectives of the research were to investigate and describe features of financial management practices and financial characteristics of SMEs in Vietnam, to develop and test a model of SME profitability, and to contribute knowledge of the relationship between financial management and characteristics to improve SME profitability by using tools of efficient financial management. As for other research theses on aspects of SME, the thesis provided background to SMEs in Vietnam including finance, use of finance and financial management techniques adopted by managers. In looking at financial management practices, the researcher examined information systems, financial reporting, financial analysis, working capital management, fixed asset management and capital structure management. The thesis developed from theory, a model showing leakages between financial management practices, efficient financial management and financial characteristics and the product of management, small enterprise profitability. This profitability was measured in terms of profit return on sales, profit return on assets and on equity. Financial characteristics were measured in terms of liquidity and financial leverage ratios as well as activity ratios.

The researcher developed a sample for a survey based on the documented number of SMEs in Vietnam. This provided a sample of 160 enterprises, and data

from these enterprises were used to test the relationships between financial management SME characteristics and SME profitability.

As for other DBA research theses, the study concluded with an examination of implications for enterprise owners, Governments, those responsible for training and guiding small enterprises in Vietnam. Some suggestions for further research were presented.

A further study on aspects of financial management of small enterprises was produced in 1999: in a thesis: **Financial characteristics and performance of small enterprises**. This study was undertaken in Indonesia and the research problem addressed was to determine whether financial structures and financial performance of small enterprises, with cooperatives and non-cooperative structures, differ and explain any differences identified. The study was restricted in terms of data collection, to small enterprises that operated in one province of Indonesia and to those cooperatives selling products or services to members in the province. In this study, a cooperative was defined as a business enterprise with members that include individuals or legal entities and one that operates its activities based on cooperative principals as defined within Indonesia. A theoretical framework was developed indicating that financial characteristics and performance and also cooperative structure were likely to be affected by financial skills of the enterprise owner and manager, various financial institutions in the marketplace, and the environment – economic, legal and fiscal. Field data was collected from about 160 cooperatives and some 70 non-cooperative enterprises in the province with a final total of some 130 usable bits of data. This data was used to calculate various measures of financial performance and tests were made to examine the relationship between factors in the research model. As an overall conclusion, the study demonstrated that there were significant differences in

financial characteristics and performances of small enterprises structured either as cooperatives or non-cooperatives. The researcher examined the implications of these outcomes, and suggested further research.

The outcomes of research have already been referred to in this paper where the researcher looked at the question of business environmental scanning practices and the relationship between these practices and SME performance with data from Vietnam. Business environmental scanning was defined as a gathering and using information about events, trends and changes in an enterprise outside or external environment, the knowledge of which presumably assists owners and managers in business decisions. The outcome of this research summarized types of information collected by entrepreneurs, sources of this information, sources used to collect each type of information, methods of information collecting, and usage of information in decision making. As such, the study made a contribution to literature and the author raised a number of implications and suggested further research to expand the knowledge of information usage by SME owners and managers.

Doctoral research outcomes – SME policy:

As previously noted, the majority, if not all, doctoral theses examining aspects of SME organization and activities, tend to comment on policy particularly in terms of the outcomes of the research. However, some DBA theses focused heavily on policy at national and enterprise levels. An example of this is a research leading to the thesis: **Enhancing technological capabilities in the Malaysian indigenous electronics industry**. Given the direction of this research, the author devoted a chapter to significant research issues linked to national technology policy, corporate technology strategies and developing technological capabilities all leading to global competitive advantages. At the national level, the

researcher looked at the evolution of technology policy, apparent directions of policy in Malaysia at the time of the research, and the impact of institutional structure incentives and funds linked to policies and then presented a review of adequacy of government measures.

This was followed by a section focusing on internal or enterprise technology strategies with an emphasis on key variables involved in such strategies. This was concluded with a critical appraisal of enterprise strategies linked to national policies in Malaysia.

Whether the SME research focused on management practices, factors influencing growth and development, characteristics of enterprises and owners or style and success of managers, researchers invariably found that there were significant areas of policy important from the point of view of national strategies and individual enterprise strategies. This is to be expected and applauded.

Summary:

A major objective of this paper was to illustrate examples of doctoral research undertaken by candidates supervised by Southern Cross University in the field of business and management but with particular reference to small and medium enterprises. It was argued that SMEs are of such significance in Asia that it would be inevitable that many doctoral studies would either examine aspects of SME management or at least use SMEs in the data collection process to evaluate concepts developed in theoretical frameworks. The paper also emphasized the key role of staff attached to the Graduate College of Management at SCU in initiating research into SME activity and supervising that research. The fact that more than 250 doctoral theses have been produced, including a significant proportion focusing on aspects of SME management, supports the role of Southern Cross University staff in this field.

The Paper then proceeded to illustrate with examples, research into various aspects of SME management – characteristics of SMEs and their managers and staff, growth and development of SMEs, management practices and techniques adopted to develop enterprise success, SME policy and management style and enterprise success.

Achievements as at 2008 do not suggest that SCU can be complacent, rather it is more important to identify gaps in SME activities which still remain to be examined through doctoral research. These include performance of various groups of SMEs – it is a fallacy to assume that “SMEs” represent one group of enterprises – rather within definitions adopted by most Asian countries, there are many sub groups that have yet to be examined at this level of research. In addition, little to date has been achieved in examining different performance levels or different characteristics of SMEs in different industry groups – service, retail, manufacturing, agriculture as well as sub-sections of each of these fields.

By definition, SMEs are defined as those managed by individuals who do not have expertise in all areas of management and who therefore rely on advice externally by way of consultants or professionals or government personnel dedicated to this activity. Little research has been undertaken in terms of the success of such advice, the format of the advice and the outcome of advice. While there have been some doctoral dissertations or theses looking at the impact of education and training on small enterprise performance, the outcomes are not finalized and more research needs to be undertaken in terms of type of education and training, quality of education and training and the best mix of education and training to ensure enterprise success.

Finally, we can say that comparative studies between nations within Asia would be a completely new field worthy of consideration by future doctoral candidates.

What would be the outcome for example, of comparing the performance of a group of SMEs in Indonesia with a common or like group in Malaysia or Thailand or Mainland China or some other Asian nation? It may be that such studies identify comparative advantages of SMEs in particular industries in particular countries and this is a future area for doctoral research.

References:

Adam, James :2002; Migrant and local entrepreneurial business networks.

DBA thesis Southern Cross University Australia

Augusty Ferdinand:1999; Strategic pathways towards sustainable competitive advantage, DBA thesis Southern Cross University Australia

Chan Sek Foo : 2002; A study of transformational leadership.TQM implementation and employee satisfaction in the apparel industry in Hong Kong, DBA thesis Southern Cross University Australia

Dang Ngoc Dai : 2001; Business environmental scanning practices and SME performance, DBA thesis Southern Cross University Australia

Hamdan Bin Mohd Salleh: 2000; Globalisation of engineering services: challenges for Malaysian consulting firms, DBA thesis Southern Cross KUniversity Australia.

Herman Hermanto: 1999; Financial characteristics and performance of small enterprises, DBA thesis Southern Cross University Australia.

Kuppusamy Kanapathi: 2003; Small medium industries in Malaysia:criteria for developing competitiveness for transition to growth,DBA thesis Southern Cross University Australia

Koh Yang Fatt: 2005; Determinants of small business startup intention, DBA thesis Southern Cross University Australia

Selvanathan,A: 1999; Enhancing technological capabilities in the Malaysian indigenous electronics industry, DBA thesis Southern Croaa University Australia

Sukanthasirikul Kanchana:2004;Factors influencing consumer purchase of service products,DBA the sis Southern Cross University Australia

Supramaniam Shanmugam;2003; A quality management model for Manufacturing SMI's in Malaysia, DBA thesis Southern Cross University Australi

Tan Mak Koon: 2005; Measuring service quality performance in the food and beverage industry, DBA thesis Southern Cross University Australia.

Recognizing Innovative Opportunities: The Mediating Role of Entrepreneurial Alertness

by Ru-Mei Hsieh, Donna J. Kelley, and Chang-Yung Liu

The purpose of this study is to elaborate on the relationships between entrepreneurs' prior knowledge, information sources from social networks, entrepreneurial alertness (perception and interpretation ability), and the recognition of innovative opportunities. We additionally examine the mediating role of entrepreneurial alertness. Participants in the study were founders of 114 Taiwanese start-ups registering with the Ministry of Economic Affairs. Results indicate that prior knowledge of customer problems and markets, and social sources of informal industry networks had positive effects on entrepreneurial alertness. Moreover, interpretation ability was both positively associated with the innovativeness of opportunities and partially mediated the relationship between prior knowledge of markets and opportunity recognition.

Introduction

Opportunity recognition has emerged as a focal point in the field of entrepreneurship (Shane & Venkataraman, 2000). A number of studies acknowledge the contributions of “prior knowledge” (Shane, 2000; Shepherd & DeTienne, 2005; Baron, 2006) and “social networks” (Ardichvili et al., 2003; Hills, Lumpkin & Singh, 1997) in explaining opportunity recognition. Prior knowledge refers to an individual's distinct

understanding about a particular subject matter and provides the person with the capacity to identify certain opportunities (Shepherd & DeTienne, 2005; Shane, 2000; Venkataraman, 1997). On the other hand, social networks can expand the entrepreneurs' access to information (Singh, 2000). Thus, information from social networks also plays a crucial role in recognizing opportunities (Davidsson & Honig, 2003; Ozgen & Baron, 2007).

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Extensive efforts have been made to explain the benefits of entrepreneurs' prior knowledge and social networks. Less attention has been paid, however, to explaining how knowledge, and information from networks, influence opportunity recognition. Previous studies have addressed the following question: "why do some people discover specific opportunities but not others?" (Shane, 2000)." From the Austrian economics viewpoint, opportunities exist because different people possess different information and knowledge. Idiosyncratic prior knowledge leads people to discover certain opportunities (Venkatarman, 1997; Shane, 2000). From the cognition perspective, opportunities emerge from a complex pattern of changing conditions. Entrepreneurs use the cognitive frameworks they possess to connect the dots between changes in the environment (Baron, 2006). Combining the above two perspectives, this study goes a step further in addressing the additional role of entrepreneurial alertness (Kirzner, 1979). The following research question is addressed: How do entrepreneurs use their prior knowledge and social networks to improve entrepreneurial alertness in recognizing innovative opportunities?

The term "alertness" was first used by Kirzner (1973) to explain the recognition of entrepreneurial opportunity. Entrepreneurial alertness has been identified as a major factor in the process of opportunity recognition, but the factors explaining alertness and the relationships between this and other factors are still ambiguous. Gaglio and Katz (2001) provide a cognitive psychological basis to explain that "chronic schema" will assist entrepreneurs to alert opportunities. This study provides new insights into the relationship between different types of prior knowledge (Shane, 2000; Marvel & Lumpkin, 2007) and social networks of entrepreneurs (Ozgen & Baron, 2007) that are associated with entrepreneurial alertness (perception and interpretation ability) (Gaglio & Katz, 2001). Moreover, we predict that a higher level of entrepreneurial alertness will be linked to the innovativeness of opportunities and will also mediate the relationship of prior knowledge and

social networks to opportunity innovativeness.

Literature Review

Theoretical background

Austrian economists believe that markets are composed of people who possess different information (Hayek, 1945; Shane, 2000). Hayek, in his 1945 work, "The Use of Knowledge in Society," pointed out that the major feature of market economics is the concept that individuals have different information and knowledge, and only a few people will know where the slack resources are. Opportunities only exist when a person knows about them (Kirzner, 1979; Yu, 2001). Following this concept, Venkatarman (1997) pointed to the concept of a "knowledge corridor" to explain that information asymmetry is necessary for opportunities to exist. Similarly, Shane (2000) argued that all individuals are not equally likely to recognize a given entrepreneurial opportunity. From a cognitive perspective, on the other hand, cognitive properties can explain why certain people will discover particular opportunities (Mitchell, Busenitz, Lant, McDougall, Morse, & Smith, 2002). Baron (2006, p.106) emphasized the role of "pattern recognition" to explain how specific individuals perceive complex and seemingly unrelated events as constituting identifiable patterns. This second perspective seeks to understand how entrepreneurs think, and why some people, and not others, are able to recognize opportunities.

Following both Austrian and cognition perspectives, this study focuses on the role of entrepreneurial alertness for two reasons. First, we seek to advance theoretical development about the opportunity recognition process. According to the above arguments, knowledge and cognition ability are key factors in recognizing new business opportunities. While prior knowledge can certainly provide cognitive raw material to facilitate opportunity recognition, so, too, can an entrepreneur's social networks. We discuss the relationships between prior knowledge, social networks, entrepreneurial alertness and opportunity. Our second objective is to facilitate

entrepreneurship empirics by developing specific, testable hypotheses regarding entrepreneurial alertness and opportunity recognition.

Entrepreneurial alertness

Alertness has been defined as “*the ability to notice, without search, opportunities that have hitherto been overlooked*” (Kirzner (1979, p.48) and as “*a motivated propensity of man to formulate an image of the future*” (Kirzner, 1985, p.56). More specifically, entrepreneurial alertness is an attitude of receptiveness to available, but overlooked, opportunities (Kirzner, 1997, p.72). Following Kirzner’s seminal conceptualization, subsequent empirical evidence suggests that those who have high level entrepreneurial alertness are more likely to identify opportunities than people who do not possess this alertness. Kaish and Gilad (1991) tested Kirzner’s (1973) concept of alertness, comparing 51 founders of companies with 36 executives of a large company. They found that entrepreneurs do spend more time searching for information in their off hours and through nonverbal scanning. Afterward, Busenitz (1996) replicated the Kaish and Gilad (1991) study by using random sampling, and further re-examined two hypotheses developed by them, providing empirical support for their theoretical framework.

Gaglio and Katz (2001), however, recognized theoretical gaps in understanding alertness, arguing that it may be possible to address them by considering alertness to be heuristically driven. They proposed a chronic alertness schema as the heuristic driving awareness, adding that the existing means-ends framework may be inappropriate. They have detailed a conceptual model and research agenda designed to answer behaviors and cognitive approaches to the theory of entrepreneurial alertness. In this study, we follow Gaglio and Katz’s (2001, p.97) arguments, defining entrepreneurial alertness as two kinds of cognitive ability: perception (perceiving the market environment correctly); interpretation (identifying the true driving forces and critical factors, and inferring the real relational dynamics among these

elements). These cognitive capacities help entrepreneurs to perceive market needs and/or underemployed resources, and to recognize a “fit” between particular market needs and specified resources. Then, they are able to imagine and create new mean-ends framework leading to new business opportunities (Ardichvili et al., 2003).

Prior knowledge and entrepreneurial alertness

Venkataraman (1997) proposed that information asymmetry is necessary for entrepreneurial opportunities to exist. Several empirical studies provide support for the arguments that prior knowledge increases the likelihood of identifying opportunities. For example, Shane (2000) used a case study approach to examine eight new venture opportunities and argued that three major dimensions of prior knowledge are important to the process of entrepreneurial discovery: prior knowledge of markets, ways to serve markets, and customer problems. In another study, Shepherd and DeTienne (2005) explored the constructs of potential financial reward and prior knowledge of customer problems to provide a deeper understanding about the identification of opportunities. They showed that the level of an individual’s prior knowledge increased the number of opportunities identified and the innovativeness of opportunities. Recently, Marvel and Lumpkin (2007) investigated the relationship between human capital and innovation radicalness. They examined three types of general human capital and four types specific human capital by investigating technology entrepreneurs’ prior knowledge. Their research found that innovation radicalness was positively related to prior knowledge of technology, but negatively related to prior knowledge of ways to serve markets.

Previous research in entrepreneurial alertness suggests that increased knowledge and experience in a particular field allows individuals to acquire important cognition ability. For example, Yu (2001) argued that an individual’s experience is accumulated into

a stock of knowledge that can be used to interpret incoming information in a way that differs from the perceptions of the general public. Baron (2006) pointed out that knowledge of a particular market, industry or customer is the raw material through which pattern cognition is constructed. More specifically, prior knowledge helps entrepreneurs build an idiosyncratic cognitive structure and employ a more complex schema, which is characterized by extensive cross-links to other schema (Ardichvili et al., 2003; Gaglio & Katz, 2001).

In this study, we stress the importance of different types of prior knowledge as prerequisites for entrepreneurial alertness. (1) “Prior knowledge of ways to serve markets” refers to the knowledge of how new technologies could be used to create a product or service (Shane, 2000). Individuals knowing about specific ways to serve markets will enhance their cognitive frameworks in expertise areas. Therefore, they can use similar ways to meet market needs and recognize particular opportunities accurately and quickly. (2) “Prior knowledge of customer problems” implies that individuals knowing how to meet customer needs (Shane, 2000; Marvel & Lumpkin, 2007). Individuals possess customer knowledge will more familiar with their existing or potential customer’s feeling and try to fill their need. This may help entrepreneurs to break existing means-ends framework. (3) “Prior knowledge of market” implies that individuals with experience as a professional worker in an industry often have a better understanding of how particular markets operate (Marvel & Lumpkin, 2007; Politis, 2005; Shane, 2000). Market knowledge enables individuals to have higher sensitivity about macro and microeconomic disequilibrium; for instance: changes in policy, technology or events, or mistakes or inefficiencies in the existing market (perception ability). Also, individuals with greater market knowledge will use their cross-linkage ability, which leads them to

create new means-ends framework and understand the commercial potential of the situation (Gaglio & Katz, 2001, Gaglio, 2004). (4) “Prior knowledge of technologies” refers to individuals familiar with specific technology in a particular industry. Individuals with rich technology knowledge tend to think from the supply side. They may be particularly sensitive to identifying underemployed resources, such as production processes, or new or unexploited technology (Ardichvili et al., 2003; Shane, 2000). It would follow that these individuals would have a higher ability to create new means-ends framework in their industries (Gaglio & Katz, 2001). In all, this leads to hypothesis 1a and 1b:

H1a: Entrepreneurs’ prior knowledge will be positively related to perception ability.

H1b: Entrepreneurs’ prior knowledge will be positively related to interpretation ability.

Social networks and entrepreneurial alertness

Entrepreneurs’ social networks have been found to be important in the opportunity recognition process. This study focuses on how individuals access information from different social network sources: informal industry networks, mentors, and participation in professional forums (Ozgen & Baron, 2007). First, “informal industry networks” enable individuals to access information from their current or past customers, suppliers, or co-workers. Hence, informal networks will help entrepreneurs obtain valuable information related to markets, customers, technologies, or products within a specific industry. In other words, people with this kind of information will have a more complex schema about their industry or market than people without this resource. Also, they will be more sensitive about changes in the market environment. In addition, the broader the entrepreneurs’ informal networks, the more likely they are to acquire a variety of information from different

viewpoints. Therefore, they are more likely to connect seemingly unrelated information and generate new business ideas.

Secondly, “mentors” refer to people who provide advice, knowledge or coaching to entrepreneurs. A mentor is usually a more experienced and professional individual. Relationships with mentors are often intense and long-lasting. These individual can provide strong guidance to nascent entrepreneurs, influencing their thinking and the way they perceive market information (Ozgen & Baron, 2007). In other words, entrepreneurs that learn and obtain information from experienced mentors have unique and valuable information that can increase their alertness to new business opportunities. Thirdly, “participation in professional forums” such as conferences, meetings, and workshops will help entrepreneurs access market or technology information that is more recent and of greater variety. In addition, this enables them to extend their business networks quickly. Singh (2000) provides sound evidence that weak ties in an entrepreneur’s social network plays a significant role in the recognition of opportunities. Ozgen and Baron (2007) found that participation in professional forums produces beneficial effects to entrepreneurs as well. In other words, by acquiring recent information from forums, individuals will improve their perception ability about market disequilibrium and trends. In addition, people usually exchange a variety of information and knowledge at these events. This can lead them to connect cross-linked fields. To sum up, social networks help the entrepreneur access valuable information, and this information directly influences their alertness ability. The above discussion leads to the following hypothesis 2a and 2b:

H2a: Information from social networks will be positively related to an entrepreneur’s perception ability.

H2b: information from social networks will be

positively related to an entrepreneurs’ interpretation ability.

Entrepreneurial alertness and innovativeness of opportunities

An opportunity involves the potential to create something new, such as new products or services, new markets, new technology, etc. (Baron, 2004). Through innovation, entrepreneurs can improve their efficiency and effectiveness in existing markets, or create new means-ends frameworks in these markets (Gaglio, 2004). On the other hand, entrepreneurial alertness has been advanced as the cognitive engine driving the opportunity identification process. It is a critical ability for entrepreneurs, which leads to the discovery of new opportunities. According to Gaglio and Katz (2001), alert individuals will notice the changing environmental cues and figure out what is really going on. Thus, perception ability will help entrepreneurs comprehend existing means-ends framework in the market. Furthermore, through their interpretation ability, alert entrepreneurs will be more able to “think outside the box” than persons with lower alertness (Baron & Ward, 2004). Then, they will be more likely to break existing means-ends frameworks and create new ones. This suggests that entrepreneurial alertness (perceiving and interpreting) can enhance the innovativeness of opportunities. The discussion above leads to the following hypothesis 3a and 3b:

H3a: Perception ability will be positively associated with opportunity innovativeness.

H3b: Interpretation ability will be positively associated with opportunity innovativeness.

Entrepreneurial Alertness as a Mediator

Based on the discussion above, this study argues that entrepreneurial alertness is a mediator between an antecedent variable (prior knowledge and social networks) and the consequent variable (innovativeness of opportunities). Specifically, a mediator represents a generative mechanism through

which a focal independent variable is able to influence a dependent variable of interest (Baron & Kenny, 1986). Prior knowledge and social networks provide venture information to the entrepreneur, and this information will reinforce the individual's cognitive structure for opportunity recognition. Alert individuals may be more likely to recognize events of disequilibrium, or they may be more sensitive to the profit potential of ideas and events than relatively non-alert individuals. Therefore, the effect between prior knowledge, social networks and opportunity recognition is significantly advanced when the entrepreneur is alert to potential opportunities. Alert entrepreneurs are therefore more likely to recognize opportunities by using their knowledge about the market environment, by identifying the true driving forces and critical factors, and by inferring the real relational dynamics among these elements (Gaglio & Katz, 2001). This information and knowledge enhances the veridical perception and interpretation of entrepreneurs, enabling them to notice the commercial potential of the situation.

Gaglio and Katz (2001) and Gaglio (2004) argued that alert entrepreneurs assess changing market situation events, and they cannot ignore or discount what is happening and thus come to realize opportunities. However, simply knowing the market situation or noticing an event change is not sufficient for identifying potential opportunities. Entrepreneurs alert enough to break existing means-ends frameworks provide the critical elements between these relationships. Thus, prior knowledge and social networks facilitate the functionality of an entrepreneur's alertness, increasing the potential for innovative opportunities. We infer that entrepreneurial alertness is a mediator variable between the antecedent variables and the dependent variable in this study. This leads to hypothesis 4a and 4b.

H4a: Entrepreneurial alertness mediates the

relationship between prior knowledge and innovativeness of opportunities.

H4b: Entrepreneurial alertness mediates the relationship between social networks and innovativeness of opportunities.

Method

Sample

Data for the study were collected through a mail survey of nascent entrepreneurs in Taiwan. The sampling list was obtained from Taiwan's Ministry of Economic Affairs. Participants in the study were founders of Taiwanese start-ups registering their businesses between June, 2008 and November, 2008. We mailed a structured questionnaire to 1,000 entrepreneurs randomly selected from the 14,978 entrepreneurs in this list during December, 2008. One hundred and fourteen valid returns were obtained over the following two months. The demographic characteristics of the sample are presented in Table 1. Of the respondents, 77.7% were male. Their average age was 40.27 (s.d. =8.61). The highest level of education completed for a majority of the sample was a bachelor's degree (57.7%), with 27.9% having completed a senior high school degree. The average number of years of work experience was about 14.5 years (s.d. =8.48).

Pilot Test

The survey was first pilot tested with founders of start-ups in Taiwanese incubators. A list of incubators was obtained from Taiwan's Small and Medium Enterprise Incubation Centers database. Incubators were selected based on affiliations with universities. We mailed a structured questionnaire to a total of 756 entrepreneurs in June, 2008. Forty five (6.0%) valid returns were obtained. After pilot testing, we identified unclear items and wording, and tested reliability of items to modify the scale. Moreover, because limited empirical work existed to validate the alertness construct (Tang, 2008); we engaged in a deductive process (Hinkin, 1995;

1998) to develop a measure based on Gaglio and Katz (2001). We conducted an exploratory factor analysis and dropped 5 items that had high cross-factor loadings. The remaining 7 items had loadings higher than 0.65 on their corresponding factors.

Measures

Prior knowledge. We adopt the definition of prior knowledge by Shane (2000) and Marvel and Lumpkin (2007). The measure of four types of prior knowledge (ways to serve markets, customer problems, markets and technology) were developed on the basis of 12 survey items. Items followed a five-point Likert-type scale (1=strongly disagree vs. 5=strongly agree). Reliability was acceptable; the Cronbach alpha for the prior knowledge is 0.935, 0.836, 0.918 and 0.808, respectively.

Social networks. Social network measures were adapted from scales developed in prior research (Ogzen, 2003; Ogzen & Baron, 2007). Items followed a five-point Likert-type scale (1=strongly disagree vs. 5=strongly agree). *Informal industry networks* were measured by 3 items and assessed the degree of new business information accessed from suppliers, investors, and customers. *Mentors* were measured with 3 items. Respondents were asked to indicate the degree ($\alpha=0.717$) information was provided by mentors ($\alpha=0.738$). *Professional forums* were measured with 3 items relating to the information gained from participating in professional forums; such as seminars, conferences, and workshops ($\alpha=0.842$).

Entrepreneurial alertness. Based on Gaglio and Katz' (2001)'s definition and propositions, entrepreneurial alertness was measured through two variables. In this study, to access *perception ability*, 3 items were used to measure sensitivity to market information and the accuracy of the information entrepreneurs perceived ($\alpha=0.664$). To access *interpretation ability*, 3 items were used to measure the ability in which entrepreneurs combine seemingly unrelated information and

create new means-ends frameworks ($\alpha=0.786$). Items followed a five-point Likert-type scale (1=strongly disagree vs. 5=strongly agree).

Innovativeness of opportunity. The dependent variable is the innovativeness of the opportunity entrepreneurs recognized. We follow the conceptions of Koellinger (2008), measurement using 3 items relating to the unfamiliarity of products or services for potential customers, the uniqueness of products or services compared with competitors, and the level of industry change represented by the product or service ($\alpha=0.767$). Items followed a five-point Likert-type scale (1=strongly disagree vs. 5=strongly agree).

Control variables. This study included controls for the variables that might affect the hypothesized relationships: age, gender, education, work experience and industry. Analyses controlled for age and education because they could be linked to prior knowledge and social networks. A number of studies have indicated that level of education and work experience will have strong effects on opportunity recognition (e.g., Davidsson & Honig, 2003; Marvel & Lumpkin, 2007). In addition, entrepreneurs in different industries might have different impacts on entrepreneurial alertness and opportunity recognition. We thus asked the respondents to identify their firm's industry type (manufacturing, service, or others).

Results

To test the hypotheses, we ran separate hierarchical regression analyses and used SPSS statistical software for all analyses. H1 examines the association between prior knowledge (four independent variables), and entrepreneurial alertness (two dependent variables). The analyses tested four models in Table 1. First, in model 1 and 3, age, gender, education, work experience and industry were included as control variables ($R^2=0.019$; 0.096 , respectively). Prior knowledge was introduced as a step change in Model 2 and 4. The results show that prior knowledge of

customer problems ($\beta=0.341$ and 0.285 ; $p<0.01$, respectively) and markets ($\beta=0.243$ and 0.239 ; $p<0.05$, respectively) were significant in the explained variance ($R^2=0.24$ and 0.26 , respectively). Overall, H1a and H1b were partly supported.

H2 focuses on the relationships between social networks (three independent variables) and entrepreneurial alertness (two dependent variables). Similarly, the analyses tested four models in Table 2. Models 1 and 3 contains the control variables ($R^2=0.019$ and 0.103 , respectively). Models 2 and 4 include both the control and predictor variables. As shown in model 2 and 4, social networks of informal industry networks was a statistically significant predictor of perception ability ($\beta=0.374$; $p<0.05$) ($R^2=0.248$) and interpretation ability ($\beta=0.374$, $p<0.05$) ($R^2=0.264$). This evidence provides

partial support for hypothesis 2a and 2b, whereby informal industry networks are positively associated with entrepreneurial alertness, but not mentors and professional forums. H3 focuses on the relationship between entrepreneurial alertness and innovativeness of the opportunity. The analyses tested two models in Table 3. In model 1, we entered only the control variables with dependent variables ($R^2=0.038$). Model 2 includes both the control and predictor variables. As shown in Model 2, entrepreneurial alertness relative to interpretation ability was a statistically significant predictor of the opportunity innovativeness ($\beta=0.480$; $p<0.001$) ($R^2=0.290$). Thus, H3b was supported. On the other hand, perception ability was not highly related to the innovativeness of opportunities. H3a was therefore not supported.

Table 1
Regression Results for Prior Knowledge and Entrepreneurial Alertness

Variables	Perception ability		Interpretation ability	
	Model 1	Model 2	Model 3	Model 4
Control variables				
Age	.085	.180	-.194	-.106
Gender	-.061	-.066	-.225*	-.237*
Education	-.001	-.024	.143	.131
Work experience	-.174	-.245	.101	.030
Industry	.009	.001	.035	.017
Prior knowledge				
Ways to serve markets		-.113		-.194
Customer problems		.341**		.285**
Markets		.243*		.239*
Technology		.029		.068
R ²	0.019	0.24	0.096	0.26
Change in R ²		0.181		0.164
F-value	0.368	2.789**	2.025	3.595***

* $p<0.05$; ** $p<0.01$; *** $p<0.001$

Table 2
Regression Results for Social Networks and Entrepreneurial Alertness

Variables	Perception ability		Interpretation ability	
	Model 1	Model 2	Model 3	Model 4
Control variables				
Age	.081	.177	-.202	-.121
Gender	-.063	-.013	-.230*	-.191*
Education	.011	.021	.161	.168

Work experience	-.170	-.187	.110	.090
Industry	.007	.044	.033	.059
Social sources				
Industry networks		.374**		.324*
Mentors		.099		.051
Professional forums		.060		.074
R ²	0.019	0.248	0.103	0.264
Change in R ²		0.229		0.161
F-value	0.372	3.796***	2.189	4.127***

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

To further examine the mediating role of entrepreneurial alertness in the knowledge to opportunity innovativeness relationship, we conducted a three-step regression analysis following Baron and Kenny (1986). In step 1, we ran two regression models to examine whether prior knowledge had a significant effect on (1) entrepreneurial alertness and opportunity innovativeness. In step 2, entrepreneurial alertness was regressed on opportunity innovativeness. Mediation was only possible if the step 1 and 2 regression models yielded significant results for the predictors. In step 3, prior knowledge and entrepreneurial alertness were entered simultaneously as predictors of innovativeness of opportunity. We found that prior knowledge of markets had a significant

effect on interpretation ability (see Table 1) and opportunity innovativeness (see Table 4). Also, interpretation ability had a significant effect on opportunity innovativeness (see Table 3). When both variables were entered simultaneously, both effects remained significant ($\beta = 0.379$ and 277 ; $p < 0.01$). These results suggest that interpretation ability is a partial mediator of prior knowledge of markets and opportunity innovativeness. Furthermore, since social networks did not have a significant effect on opportunity innovativeness, entrepreneurial alertness did not qualify as a mediator of the relationship between social networks and this variable. Therefore, partial support was obtained for H4a, but H4b was not supported.

Table 3
Regression Results for Entrepreneurial alertness and Opportunity Recognition

Variables	Innovativeness of opportunity	
	Model 1	Model 2
Control variables		
Age	-.180	-.094
Gender	-.089	.024
Education	.115	.047
Work experience	.195	.160
Industry	.053	.035
Entrepreneurial alertness		
Perception ability		.079
Interpretation ability		480***
R ²	0.038	0.290
Change in R ²		0.252
F-value	0.758	5.497***

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table 4
Regression Results for Mediation Relationship

Variables	Innovativeness of opportunities		
	Model 1	Model 2	Model 3
Control variables			
Age	-.180	-.016	.025
Gender	-.089	-.077	.022
Education	.115	.052	-.002
Work experience	.195	.081	.072
Industry	.053	.061	.053
Prior knowledge			
Ways to serve markets		-.089	-.007
Customer problems		.075	-.047
Markets		.379***	.277**
Technology		.181	.153
Entrepreneurial alertness			
Perception ability			.013
Interpretation ability			.414***
R ²	0.038	0.265	0.396
Change in R ²		0.227	0.131
F-value	0.758	3.685***	5.358***

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Discussion

Our study empirically examined prior knowledge and social networks leading to entrepreneurial alertness and the innovativeness of opportunities. Results indicate that prior knowledge of customer problems and markets, and social sources of informal industry networks had positive effects on entrepreneurial alertness (perception and interpretation ability). Moreover, interpretation ability was both positively associated with the innovativeness of opportunities and partially mediated the relationship between prior knowledge of markets and opportunity recognition. First of all, our findings extend previous studies' contributions (e.g., Shane, 2000; Shepherd & DeTienne, 2005; Baron, 2006; Marvel & Lumpkin, 2007) about the relationship between prior knowledge and opportunity recognition by asking the question: how can prior knowledge help entrepreneurs recognize innovative opportunities? Based on the cognition perspective, we go a step further to examine the mediating role of entrepreneurial

alertness. This study's hypotheses that four types of prior knowledge would have positive effects on entrepreneurial alertness received partial supported. More specifically, this research found that prior knowledge of customer problems and markets will positively impact entrepreneurs' perception and interpretation ability. The results reveal that entrepreneurs with higher prior knowledge of customer problems and markets will more sensitive about changes and problems in the markets. Also, these two types of prior knowledge could help entrepreneurs develop prototypes and exemplar models to connect seemingly unrelated events in the markets (Baron, 2006). On the other hand, this may not apply to prior knowledge of ways to serve the market and technology. Some knowledge may channel the entrepreneurs' thought in known paths and limit their creative thinking (Shepherd & DeTienne, 2005; Marvel & Lumpkin, 2007).

Secondly, we found that informal industry networks had a strong effect on entrepreneurial alertness, but mentors and participation in professional forums did not. This result implies

that entrepreneurs rely on informal industry networks to access important information in the process of opportunity recognition. However, we found no significant effects of mentors and professional forums on entrepreneurial alertness. There may be several reasons for the inconsistency between this and previous research. One possible explanation is the sampling framework difference. For example, Ozgen and Baron (2007) found support for hypotheses about mentors and forums in IT company founders in the U.S. Entrepreneurs and managers in the IT industry often attend technology conferences or workshops to access new information. In this study, however, we draw on a random sample of nascent entrepreneurs in Taiwan that is not limited to a specific industry. Founders in some industries, such as in services, may have different information sources. It is possible this can reduce the effects of social sources on entrepreneurial alertness. Therefore, we suggest that information from entrepreneurs' social sources take into account industry practices in future research.

The third important finding relates to the different effects of the two entrepreneurial alertness abilities. It is conceivable that perception ability may be important in recognizing opportunities. However, our findings did not support the proposed relationship between perception ability and the innovativeness of opportunities. It appears it is not enough for the founders to only have the ability to perceive and notice critical information in the market. On the other hand, our results reveal that interpretation ability in entrepreneurial alertness will have positive effects on opportunity innovativeness. This suggests that the cognitive ability to infer the real relational dynamics among market elements is particularly influential in innovativeness of opportunities. In other words, entrepreneurs who had more complex schema about their industry may enhance their ability to cross-link and connect seemingly unrelated information in the markets. This is the key factor for creating new business models, products, or technologies in their new start-ups. In addition to the direct effects, our findings also indicate that the impact

of prior knowledge of customer problems was mediated by interpretation ability. This result suggests that one cognitive mechanism through which one knows more about customer problems facilitates opportunity innovativeness, encouraging the formation of interpretation ability. This implies that when entrepreneurs are familiar with customer needs, they have a higher cognitive ability to infer solutions to those problems. This is consistent with previous findings (e.g., Sherpherd & DeTienne, 2005).

Conclusions

This article has reviewed and synthesized available research into a framework to enhance our understanding of opportunity recognition. This study makes several contributions. First, it suggests that conceptualizing entrepreneurial alertness as mediator may provide valuable tools for understanding the process of opportunity recognition. Entrepreneurial alertness is not just an aptitude to recognize opportunities serendipitously, but a kind of cognitive ability derived from prior knowledge and social networks. There are some empirical evidences to support the claim that entrepreneurs do indeed think and reason differently with regard to opportunities (Kaish & Gilad, 1991). This research goes a step further to develop a scale based on Gaglio and Katz (2001) that helps distinguish between the perception and interpretation abilities of entrepreneurs. Thus, our results extend the theoretical and empirical boundaries of entrepreneurship research.

In addition, this study has offered insights into the manner by which prior knowledge, social networks, and entrepreneurial alertness influence the innovativeness of opportunities. Our findings increase our understanding of nascent entrepreneurs by examining the types of prior knowledge and different social sources of information (e.g., Marvel & Lumpkin, 2007; Ozgen & Baron, 2007). We demonstrate how differences in prior knowledge (ways to serve markets, customer problems, markets, and technology) and differences in social networks

(informal industry networks, mentors, and professional forums) influence entrepreneurial alertness and the innovativeness of opportunities.

The findings of this study also have practical implications. For entrepreneurs, if they possess the more complex cognitive frameworks needed to perceive and interpret information in the market, they may be more likely to recognize innovative opportunities. Our study suggests that a person who has rich knowledge of customer problems may be best positioned to identify opportunities. For education, we suggest that the designs of entrepreneurship courses not only focus on entrepreneurial skills, but also build students' entrepreneurial alertness through techniques that strengthen their sensitivity and cross-linkage ability. Educators could take into account entrepreneurial attitudes and cognition in their courses.

This study has a number of limitations. First, our data are self-reported. Although the measures were adapted from previous research, there is the potential problem of common method variance. Future research could separate data collection by drawing on multiple individuals for different measures (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Second, the research is limited by its subjective measures for assessing the innovativeness of opportunities. However, entrepreneurs are most apt to know best the level of innovativeness embodied in their products, services, and technologies. Future research, however, could address problems such as responses impacted by social desirability.

References

- Ardichvili, A., Cardozo, R., & Ray, S. (2003). "A theory of entrepreneurial opportunity identification and development," *Journal of Business Venturing*, 18 (1), 105-123.
- Baron, R. A. & Ward, T. B. (2004). "Expanding entrepreneurial cognition's toolbox: Potential contributions from the field of cognitive science," *Entrepreneurship Theory & Practice*, 29, 553-573.
- Baron, R. A. (2004). "Opportunity recognition: Insights from a cognitive perspective," *Opportunity Identification and Entrepreneurial Behavior*, Greenwich, CT: Information Age Publishing, 47-73.
- Baron, R. A. (2006). "Opportunity recognition as pattern recognition: How entrepreneurs 'connect the dots' to identify new business opportunities," *Academy of Management Perspectives*, 20(1), 104-119.
- Baron, R. M., & Kenny, D. A. (1986). "The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical consideration," *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
- Busentiz, L. W. (1996). "Research on entrepreneurial alertness: Sampling, management, and theoretical issues," *Journal of Small Business Management*, 34(4), 35-44.
- Davidsson, P. & Honig, B. (2003). "The role of social and human capital among nascent entrepreneurs," *Journal of Business Venturing*, 18, 301-331.
- Gaglio, C. M. (2004). "The role of mental simulations and counterfactual thinking in the opportunity identification process," *Entrepreneurship Theory & Practice*, 28, 533-552.
- Gaglio, C. M., & Katz, J. A. (2001). "The psychological basis of opportunity identification: entrepreneurial alertness," *Small Business Economics*, 16, 95-111.
- Hayek, F.A. (1945). "The use of knowledge in society," *American Economic Review*, 35 (4), 519-530.
- Hills, G., Lumpkin, G. T., & Singh, R. P. (1997). Opportunity recognition: perceptions and behaviors of entrepreneurs. *Frontiers of Entrepreneurship Research*, 203-218. Wellesley, MA: Babson College.
- Hinkin, T. R. (1995). "A review of scale development practices in the study of organizations," *Journal of Management*, 21, 967-988.
- Hinkin, T. R. (1998). "A brief tutorial on the development of measures for use in survey questionnaires," *Organizational Research*

- Methods*, 1, 104-121.
- Kaish, S., & Gilad, B. (1991). "Characteristics of opportunities search of entrepreneurs versus executives: Sources, interests, general alertness," *Journal of Business Venturing*, 6(1), 45-61.
- Kirzner, I. (1979). *Perception, opportunity, and profit: studies in the theory of entrepreneurship*. Chicago: University of Chicago Press.
- Kirzner, I. (1997). "Entrepreneurial discovery and the competitive market process: An Austrian approach," *Journal of Economic Literature*, 35, 60-85.
- Kirzner, I. (1973). *Competition and entrepreneurship*. Chicago: University of Chicago Press.
- Kirzner, I. (1985). *Discovery and the capitalist process*. Chicago: University of Chicago Press.
- Koellinger, P. (2008). "Why are some entrepreneurs more innovative than others?" *Small Business Economics*, 31(1), 21-37.
- Marvel, M. R., & Lumpkin, G.T. (2007). "Technology entrepreneurs' human capital and its effects on innovation radicalness," *Entrepreneurship Theory and Practice*, 31(6), 807-828.
- Mitchell, R., Busenitz, L., Lant, T., McDougall, P., Morse, E., Smith, E. (2002). "Toward a theory of entrepreneurial cognition: Rethinking the people side of entrepreneurship research," *Entrepreneurship: Theory & Practice*, Winter 2002, 93-104.
- Ozgen, E. & Baron, R. A. (2007). "Social sources of information in opportunity recognition: Effects of mentors, industry networks, and professional forums," *Journal of Business Venturing*, 22(2), 174-192.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P., (2003). "Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies," *Journal of Applied Psychology*, 88(5), 879-903.
- Politis, D. (2005). "The process of entrepreneurial learning: A conceptual framework," *Entrepreneurship Theory & Practice*, 29, 399-424.
- Shane, S., & Venkataraman S. (2000). "The promise of entrepreneurship as a field of research," *Academy of Management Review*, 25(1), 217-226.
- Shane, S. (2000). "Prior knowledge and the discovery of entrepreneurship opportunities," *Organization Science*, 11(4), 448-469.
- Shane, S. (2003). *A general theory of entrepreneurship: The individual-opportunity nexus*. Edward Elgar, Cheltenham, UK. Northampton, MA, USA.
- Shepherd, D. A., & DeTienne, D. R. (2005). "Prior knowledge, potential financial reward, and opportunity identification," *Entrepreneurship Theory & Practice*, 29 (1), 91-112.
- Singh, R. P. (2000). *Entrepreneurial opportunity recognition through social networks*. Garland Publishing, INC.
- Tang, J. (2008). "Environmental munificence for entrepreneurs: Entrepreneurial alertness and commitment," *International Journal of Entrepreneurial Behavior and Research*, 14(3), 128-151.
- Venkataraman, S. (1997). The distinctive domain of entrepreneurship research: An editor's perspective, 119-138. In J. Katz and R. Brockhaus (Eds.) *Advances in Entrepreneurship, Firm Emergence, and Growth*. Greenwich: JAI Press.
- Yu, T. F. (2001). "Entrepreneurial alertness and discovery," *The Review of Austrian Economics*, 14(1), 47-63

Comparisons of private brands and national brands on consumers' purchase Intentions: Focused on Implications for private brands

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Recent studies demonstrated that many consumers are more likely to make a purchase decision by comparing PB and NBs due to the increases of PB's share in stores. However, most previous studies have been limited to understand consumers' purchase behaviors by accounting for competitive effects between PB and NBs. The purpose of the study is to examine not only the role of store image on attitude and purchase intentions of PB and NB products, but also the competitive effects between PB and NB in the consideration. First, the findings show that store image has positive effects on both attitude and purchase intentions of PB and NB. Second, there are competitive effects between PB and NB's attitudes and purchase intentions. Attitude toward PB increases PB's purchase intention, but decreases NB's purchase intention. However, attitudes toward NB do not affect PB's purchase intention.

Track: 14. Other SME Related Issues

Section of Korean SMEs regulatory status and reorganizing program

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- The Sensibility Analysis of SME Regulations
- Regulatory Reforming Plans to Strengthen the SME
Competitiveness
- Conclusion

1 . Introduction

The management uncertainty of SMEs (Small and Medium Enterprises) management has been growing big by rapid progress by globalization such as Free Trading agreement (FTA). A new management paradigm has been required due to a rapid progress of technology innovation, a variety of consumers' needs and industrialization of knowledge.

SMEs must boost the competitive power to survive through sustainable renovation activities to meet the rapidly changing environmental changes. They should express risk-taking entrepreneurial spirit with vision and conviction based on the creativity.

To this end, the efforts of SMEs are not only required, but such external factors of corporation as friendly business environment is much more important.

Accordingly, advanced countries have been resolutely renovating unnecessary regulations to make an ultimate entrepreneurial spirit for management environments.

Korea governments have continuously propelled regulatory reforms to meet global standards, but SMEs are not satisfied with its policies and do not think highly of the implemented results of policies. Despite various efforts of the government policies, SMEs feel corporation management becomes increasingly difficult. The reason is that various regulation effects is applied broadly.

Regulations for SME corporations have been strengthened especially in the fields of environment, health and safety management along with public awareness of quality increasing. The public concerns about corporate regulations neglected since the period of industrialization have recently grown because of being caused by the international compliance agreements.

Such intensified corporation regulations give a blow to the management of SMEs which have weak countermeasure abilities, and they may result in serious problems. Large conglomerates have an enough capabilities of dealing with the cost and burden caused by government regulations. SMEs feel relatively much more burden with same regulations. In this context, SMEs need other special cares. However, some major advanced countries have normally special regulations.

Preparing for regulation remedy is urgently needed in order to facilitate SME businesses in an era of global competition. From the perspective of SMEs, regulations should be considered through innovative, creative ideas toward SMEs. In other words, regulations must be focused on SMEs' point of views. Unnecessary or excessive regulations have not only to be abolished boldly, but also the submission of new regulatory bills has to be suppressed. Alternative policies should be made in order for SMEs to concentrate on their own businesses by urgently revamping the unreasonable or unrealistic regulations through diminishing their heavy burden. This research studies the theoretical

backgrounds of corporation regulations, examine and analyze the status of SME regulations, and tries to find the regulatory solutions for the purpose of raising the competitiveness of SMEs.

□. Theoretical background of corporation regulations

2.1 Concept of corporation regulations

Government regulations can be defined as a series of behaviors that a government restricts the private decision-making and behavior for public interest or desirable economic society making. In the era of modern capitalism nation states guarantee the freedom of economic activities of corporation and personal, but to increase the entire public interest nation restricts and supervises in limited range.

Corporation regulations can be defined that the public institutions such as a nation or a local government limits the rights of corporations or imposes the duty through laws, ordinances and rules. If public institutions give some burden or limitation to time and cost, and behavior, it should have a characteristic of restriction. OECD defines regulations as "Total of the various forms of ordinances, rules, regulations that government claims to comply through policy means."

<Table 1> corporation regulation concept

Definition of consultation	The cost for obey to government regulatory duty (information offering duty)
Broad concepts	Total meaning that not includes merely regulatory adjustment cost, but maintaining continuous cost in changing regulations and loss cost by regulations.

There are a variety of regulations to corporations. There are not only official regulations with law base, but also unofficial regulations with no legal basis. Even there are regulations regulated by non-governmental organizations or self-regulations of private institutions which are delegated by government. Typically lots of regulations; establishment, location, environment, wages, health and safety, tax are facing to corporation activities.

Regulations regarding corporation activities are divided into economical regulations, social regulations, and administrative regulations according to the OECD regulation classification. Economical regulation is that government purposes to promote the market efficiency with pricing, competition, entry, and liquidation. And it affects to resource distribution. Social regulation is that a government purposes to protect the social right or value with Health, safety, and environment. And

it regulates the corporation's form. Administrative regulation is that a government purposes to save the government's assets and finance for acquisition, management and replenishment.

<Table 2> Category of corporation regulations

	Regulatory items	Contents
Economical Regulation	Restriction about Market entry and Liquidation	Regulation of registration requirements and procedures, licensing and permits, production process and equipment
	Regulation through finance and credit policy	Finance and acquisition credit regulatory such as Money supply, exchange rate, interest rate policy, corporate finance
	Trade regulation	Import and export authorizations, procedures, etc.
Social Regulation	Health & Safety	Workplace safety, worker protection, etc.
	Environment	Environmental pollution prevention facilities, production of environment goods, etc.
	Labor	Wage standard, steady employment and condition, technical training, etc.
Administrative regulation	Tax	Tax base, payment, tax audit, etc.
	Administration	Administrative burden enforcing of paperwork and reporting, state, information provided, etc.

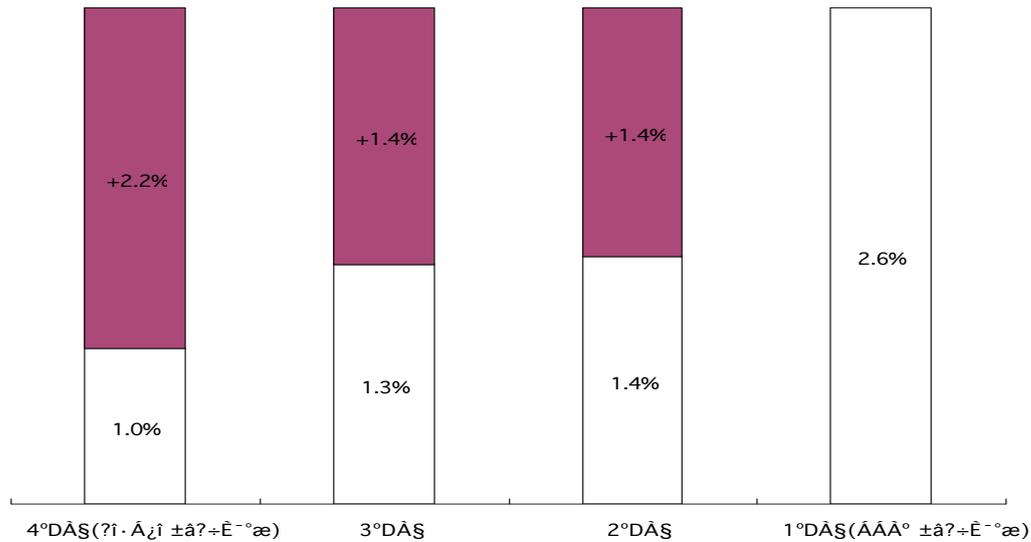
2.2. Regulatory reform and SMEs

Regulatory reform is world trend in these days. Even such a research result is existed that foreign country strength the rent seeking behavior by politicians and bureaucrats to collapse the barrier in the entry. (Shleirfer and Vishny, 1994)

Djankov and others (2000) claim that the nations with severe regulations against entry tend to be fertile ground for corruption and aggrandized “unofficial” economy where the quality of the public and private properties never improve while admitting the effect of the regulations imposed by politicians and bureaucrats.

The research conducted by Djankov, Mcleish and Ramalho (2004) is the representative quantitative research on the effect of the regulatory reform on the growth of the economy. They classified individual economies into four groups based on the regulation and corporate environment, and calculated each group's average growth rate. Then, they drew out the effect of improvement on the corporate environment based on the regulatory reform. They key findings are summarized on <Diagram 1>, which explains how an economy's growth rate is influenced as corporate environment is improved by dividing by into the groups of nations. In case of the nations in the Group 4 that are characterized by very poor corporate environment due to extremely severe regulations, growth rate may increase approximately 2.2%p when the corporate environment is improved to the level of the nations in the Group 1. In case of the nations in the Group 3 and Group 2, growth rate is expected to increase about 1.4%p.

<Figure 1> Regulatory reform and Economic growth effect



Main: Virtual growth rate at bottom of graph, colored part is possible growth rate if corporation environment is appeased.

Data : Djankov, Mcleish and Ramalho(2004)

Thus, many nations are actively deregulating to increase growth of the economy by pursuing after the increased convenience for the companies. Instead of merely de-regulating, they are pursuing after regulatory reform, and are developing to manage regulations at all times and in structured manner.

To mitigate the burden on the companies, our government is continuing to de-regulate from a long time ago. When the number of regulations registered is examined, number of regulations up until 1998 was 10,185, with the number decreasing to 5,240 cases as of July 2008.

According to state of regulation (09 Apr. present), economical regulation (2,319 cases) are the most often, and next are social regulation (1,875 cases) and administrative regulation (998 cases) by frequency order.

Ministry of Land, Transport and Maritime Affairs (943 cases), Financial Securities Commission (759 cases), Ministry for Health, Welfare and Family Affairs (617 cases), Ministry for Food, Agriculture, Forestry and Fisheries (422 cases) are the economical regulatory ranking orders.

<Table 3> Status of regulatory category (09. Apr. present)

Regulatory category		number
Economical Regulation		2,319
Entry		778
Cost		91
Business		888
Quality		562
Social regulation		1,875
Regulatory method	Input	1,719
	Result	67
	Escort to the market	89
Regulatory region	Environment	459
	industrial disaster	186
	Consumer safety	908
	Social Discrimination	322
Administrative regulation		998
Total		5,192

In case of the regulations in Korea that the companies are subjected to, there are many regulations related to the permit and approval, reporting and obligatory hiring that need to be complied with, and they are comprehensive and encompassing in nature in terms of the application scope and contents. Moreover, regulations' form exists in diverse forms such as statute, established rule, official order, administrative instruction etc. In fact, there are many regulatory and administrative interventions that are not backed up by the law.

Despite the fact that the SMEs do not have the proper resources required to comply with the regulations in general, the trend is such that the regulatory burden on them that requires extensive time and effort is increasing. Accordingly, SMEs often withdraw from the business failing to sustain it. Likewise, the reality is that they were marginalized by the government's policies. Accordingly, the level of regulatory reform that the SMEs feel is very low. SMEs claim that the quality of de-regulation is not very high due to the remnants of the core regulations. In fact, about 70% of the regulations that the companies are subjected to are focused on SMEs, which are the underdogs.

In particular, there are many regulations that the SMEs are subjected to while preparing to start up the company more so than the regulations that they are subjected to after starting up the company. Thus, it is difficult for the SMEs to get started. Regulations prior to the business start-up takes up about 75% of all the location and start-up related regulations, while regulation pertaining to the recruiting policy for the start-up takes up appropriately 40%. In terms of the safety and public sanitation regulations, regulation prior to the start-up takes up about 57%.

Most of the Korean SMEs lack business management capability, ability to absorb fixed cost, and the ability to counter-measure regulations due to the shortage of human resources and capital. Accordingly, excessive corporate regulation acts as an element that aggravates the competitiveness of the SMEs. In general, smaller companies face greater obstacles.

<Table 4> Regulatory cost of SMEs according to corporation scale

Employee count	Regulatory cost (% of Revenue)
Under 20	10.9
Upper 20 ~ under 50	4.6
Upper 50 ~ Under 100	2.8
Upper 100	3.3

Cited: Survey result by IBK Economic Research Center (2008)

There are five reasons that the regulatory burden is greater on the SMEs compared to the large companies. First, large companies can assign employees to handle compliance while the president of a SME needs to allocate time to understand the regulations and to supervise compliance. Likewise, the president's time is wasted significantly. Secondly, if new equipment is purchased to comply with the regulation, SMEs face difficulty in using the equipment in an integrated manner since they could not reach the economy of scale. Third, most of the SMEs are positioned the party that has to accept the set price in the market. Thus, it is difficult for them to mark up the price by adding in the cost of complying with the regulations. It is not possible to pass on the cost when competing with foreign companies. Fourth, presidents of the SMEs are mentally burdened when there is a period of uncertainty that requires time to counter-measure new regulations. Thus, burden increases even more since the obligation to comply with the regulations is taken more seriously than its face value. Fifth, SMEs need to compete against the companies in the unofficial segment that do not comply with the regulations. In this case, SMEs' profitability decreases even more.

Accordingly, de-regulation is crucial in order to increase SMEs' competitiveness. All types of regulations are presenting many obstacles to the SMEs. Meanwhile, forming company-friendly environment is more important than regulating in the knowledge-based economy where creative activity is prioritized. To vitalize the SMEs, it is necessary to identify the realities of the regulations as they are and to pursue regulatory reform towards a direction that the SMEs' creativity and challenging spirit can be reinforced.

III. The sensibility analysis of SMEs regulations

3.1. Survey Results

This research is executed by visiting and fax in Apr. ~ May 2008 for SMEs. 1,127 corporations respond to the survey, it is evenly distributed by regionally such as metropolitan area (45.9%) and district area (54.1%). Also as a plant location orders, district-area industrial zone has the most count corporations, national industrial zone(18.1%), agriculture and industry zone(7.2%), residential zone(5.8%), Quasi-agriculture and forestry zone(5.3%), industrial zone(4.1%), green zone(1.7%), Etc.(5.3%) orders.

<Table 5> Status of company distribution by survey response

	Description	Balance
Employee count	Under 20	43.1
	Upper 20 ~ under 100	49.8
	Upper 100	7.1
	Total	100
Region discrimination	Metropolitan	45.9
	District-area	54.1
	Total	100
Plant location	national industrial zone	18.7
	district-area industrial zone	51.7
	agriculture and industry zone	7.2
	residential zone	5.8
	industrial zone	4.1
	green zone	1.7
	Quasi-agriculture and forestry zone	5.3
	Etc.	5.3
	Total	100

3.1.1 Effect of corporation regulations

64.6% of corporations are not so serious by regulatory effect, but it is impediment. Additionally the answer either very difficult or very seriously difficult is occupied 10.7% and 4.6% each. Also the corporation, which answers very seriously difficult, is located in metropolitan area rather than district area. The corporations, which are located in metropolitan area, have managed

mental difficulty by various regulatory policies such as environmental protection and balanced regional development.

In case of plant location, green zone and industrial zone have management difficulties by regulations. On the contrary, on the other hands, corporation that are located in district area industrial zone and national industrial zone have not so much difficulties. Even though corporation that is located in industrial zone is not so serious by separate regulation, still there are difficulties in corporation management.

The regulatory affect increases if smaller corporation faces to the regulation. The survey shows that less than 20 employee corporations have the largest difficulties in corporation management. And upper 20- under 100 corporations and upper 100 corporations are coming next to. In other words, if the corporation scale is bigger, sense of regulation is being smaller.

<Table 6> Effect of regulation to corporation management

(Unit : %)

		Very seriously difficult	Very difficult	Not serious, but difficult	No difficult	Total
Total		4.6	10.7	64.6	20.1	100.0
Regional	Metropolitan area	7.0	13.3	59.4	20.3	100
	District area	1.5	7.9	70.6	20.0	100
Plant location	National industrial zone	3.8	9.5	74.3	12.4	100
	District-area industrial zone	2.3	7.7	67.8	22.1	100
	Agriculture and industry zone	0.0	7.1	64.3	28.6	100
	Residential zone	0.0	12.1	63.6	24.2	100
	Industrial zone	9.1	13.6	45.5	31.8	100
	Green zone	20.0	30.0	50.0	0.0	100
	Quasi-agriculture and forestry zone	6.5	9.7	67.7	16.1	100
	Etc.	12.9	19.4	48.4	19.4	100
	Scale	Under 20	5.3	15.0	61.5	18.2	100
Upper20 - under100		3.2	9.1	65.5	22.2	100
Upper 100		0.0	2.1	79.2	18.8	100

7 out of 10 SMEs abandoned the investment plan by government regulations. 67.5% of answered corporations abandoned the investment plan or postponed under 3 times, and even 2.5% of the corporations abandoned more than 4 times.

Metropolitan area corporations have more postpone experience than district area corporations by a regulation. Major 36.4% of district area corporations answer that they abandoned the investment plan once.

<Table 7> Investment abandons and waives experiment by regulation

(Unit : %)

		None	1	2-3	4-5	More than 6	Total
Total		30.1	35.3	32.2	1.6	0.9	100
Regional	The Metropolitan area	27.2	34.2	36.1	1.7	0.8	100
	District area	33.3	36.4	27.9	1.5	0.9	100
Plant location	National industrial zone	34.9	28.4	33.0	2.8	0.9	100
	Local industrial zone	23.3	38.5	36.5	1.3	0.3	100
	Agriculture and industry zone	47.6	52.4	0.0	0.0	0.0	100
	Residential area	41.2	44.1	11.8	0.0	2.9	100
	Industrial zone	47.6	28.6	23.8	0.0	0.0	100
	Green zone	20.0	10.0	50.0	10.0	10.0	100
	Quasi-agricultural zone	32.3	22.6	38.7	3.2	3.2	100
	Etc.	33.3	20.0	46.7	0.0	0.0	100
Scale	Under 20	31.3	32.1	28.1	6.4	2.0	100
	Upper 20 – under 100	29.0	34.0	31.4	5.0	0.5	100
	Upper 100	31.3	31.3	31.3	4.2	0.0	100

3.1.2 Corporation regulatory difficulties

As for the regulatory area that influence the SMEs' business management the most, it is the environment related regulations. The share of the responses that cited environment field was the highest with 49.0%, followed by human resources and labor area (34.6%), plants' location and permit for the land utilization (29.5%) and safety control area such as fire-fighting facility (25.8%) in the order listed. The analysis demonstrated that the companies are faced with significant difficulty due to the reinforcement of the environment related regulations following increased awareness of the general public to the environment protection issues, and the need to fulfill international covenants. Recently, labor issues surrounding the foreign workers emerged as a serious issue, and the regulations on limiting the total number of plants in the metropolitan areas, on the plants' location following the plan for the utilization of the national land and on the land utilization are causing many SMEs to experience business management related obstacles.

There are differences in the representative regulatory areas depending on the characteristics pertaining to the plants' location. In the environment area, it was considered the most representative

regulatory field in the agricultural and industrial complex while it was lowest at the commercial area.

As for the human resources and labor areas, they were presented as the representative regulatory areas in the commercial area, national industrial complex and regional industrial complex. This is the finding that demonstrates that the companies pertaining to the commercial area, national and regional industrial complex faced significant regulations related to the foreign workers and supply and use of the human resources. Plants' location and permit for the land utilization and others are the representative regulatory areas at the green land area and quasi-agricultural area.

In terms of the company size, there is difference pertaining to the representative regulatory area. Environment area is proven to be the most representative regulatory area for the companies of all sizes. In particular, companies with at least 100 employees cited the environment area the most. Companies with at least 100 employees recognize other representative regulatory areas such as plants' location, land utilization and other permit obtaining issues as well. Companies with more than 20 and less than 100 employees perceive safety control area such as fire-fighting facility as the representative regulation for the companies, and the research shows that the proportion was relatively high as well.

<Table 8> Main regulatory part which affect to corporation management

(Unit : %)

		Approval plant location and land use	HR & labor part	Environment part	Firefighting equipment and safety management	Import and export part	Logistics and distribution sector	Tax sector (sub-tax included)	Finance and funding sector	Etc.	Total
Total		29.5	34.6	49.0	25.8	11.0	8.1	18.7	21.7	1.6	100
Regional	Metropolitan area	15.6	18.7	25.0	12.4	5.3	4.1	9.1	9.3	0.6	100
	District area	17.4	18.3	23.8	12.1	5.1	3.2	7.9	11.1	1.1	100
Plant location	National industrial zone	12.0	19.4	29.1	13.7	4.6	3.4	8.6	8.6	0.6	100
	Local industrial zone	13.8	19.3	23.3	16.0	4.5	2.3	7.3	12.5	1.3	100
	Agriculture and industry zone	14.8	13.0	42.6	7.4	5.6	3.7	9.3	3.7	0.0	100
	Residential area	12.5	16.7	22.9	6.3	6.3	8.3	14.6	10.4	2.1	100
	Industrial zone	15.4	30.8	7.7	3.8	3.8	11.5	11.5	15.4	0.0	100
	Green zone	38.9	16.7	27.8	0.0	5.6	0.0	5.6	5.6	0.0	100
	Quasi-agriculture and forestry zone	38.1	9.5	23.8	11.9	0.0	7.1	4.8	4.8	0.0	100
	Etc.	18.2	20.5	22.7	4.5	4.5	2.3	11.4	13.6	2.3	100
Scale	Under 20	15.9	19.5	20.9	8.5	5.5	5.2	10.7	12.9	0.8	100
	Upper 20 – under 100	15.8	19.1	26.0	14.8	4.8	2.3	7.1	9.1	1.0	100
	Upper 100	22.2	9.7	33.3	11.1	6.9	4.2	8.3	4.2	0.0	100

As for the management area that is faced with foremost obstacle due to the regulations is the facility investment category. Among the companies that responded to the survey, 48.1% said that they face most difficulty when making facility investment, followed by the moving and expansion of the business site, human resources management and capital sourcing in the order listed. This can be interpreted as the SMEs facing difficulty due to the environment related regulations they need to comply with while making facility investment. At the time of moving and expanding business site, companies have difficulty securing plant due to the regulations such as the system of limiting total number of plants in the metropolitan area or ban on the development based on the division of land into specific parcels to obtain permit.

Quasi-agricultural and green land areas are the areas that are most difficult to make facility investment due to the regulations for the companies. Research shows that there are numerous factors at the quasi-agricultural area that make moving and expansion of the business site difficult. In terms of human resources management, difficulty level was high in case of the commercial and green land areas. In terms of the industrial complex as well, difficulty in business management is high due to the human resources management, which demonstrates the severity of human resources related problems. In term of capital sourcing, difficulty in business management was high at the national industrial complex and residential areas.

<Table 9> The field of management difficulties by regulations

(Unit: %, Multiple response)

		Launch into new business	Facility investment	HR management	Open business process	Transfer establishment and expansion	Exports and raw material supply	Subcontracting-related	Financing	Etc.	Total
Total		14.7	48.1	34.2	1.9	43.5	21.1	8.9	23.2	4.5	100
Regional	Metropolitan area	8.5	26.0	18.5	0.9	20.4	9.8	4.3	10.6	1.1	100
	District-area	7.9	25.6	16.2	0.9	20.5	10.5	3.8	10.7	3.8	100
Plant location	National industrial zone	7.9	21.8	20.6	0.6	18.8	11.5	4.8	13.3	0.6	100
	District-area industrial zone	7.6	26.3	16.7	0.5	17.7	11.7	3.6	11.7	4.2	100
	Agriculture and industry zone	3.8	32.1	15.1	0.0	17.0	13.2	9.4	7.5	1.9	100
	Residential zone	8.5	21.3	14.9	2.1	17.0	14.9	6.4	12.8	2.1	100
	Industrial zone	12.5	20.8	29.2	0.0	12.5	8.3	4.2	12.5	0.0	100
	Green zone	0.0	37.5	25.0	0.0	25.0	0.0	0.0	6.3	6.3	100
	Quasi-agriculture and forestry zone	8.9	37.8	13.3	0.0	31.1	0.0	2.2	6.7	0.0	100
	Etc.	7.5	22.5	20.0	0.0	35.0	2.5	0.0	7.5	5.0	100
scale	Under 20	8.3	24.8	17.1	0.9	18.9	10.0	3.5	13.6	2.9	100
	Upper 20 - under 100	8.7	25.8	18.1	0.8	20.5	10.6	4.5	8.5	2.6	100
	Upper 100	4.3	31.9	14.5	1.4	27.5	5.8	2.9	11.6	0.0	100

As for the inconveniences perceived by the SMEs due to the regulation, 47.7% of the companies that responded to the survey cited ‘request for excessive amount of documents or repetitive request for the same documents.’ This is due to the excessive amount of documentation work required for the documents that need to be submitted to the government in relation to the activities related to company management. Next are the ‘repetitive dealing with institution due to the overlapping of the supervising institution’ and ‘delay in progression entailing setting the work of other government offices as the prerequisite.’

Likewise, SMEs are very dissatisfied with the repetition of the same work caused by the deficiency of information exchange among each government offices and lack of integrated administrative system when it comes to dealing with the government and public institutions. Thus, improvement measures are urgently called for.

<Table 10> Difficulties of SMEs by regulations

(Unit: %)

		Duplicated administrative department, duplicated repeated operation towards government	Request excessive or duplicated submit of documents	Operational postpone under pre-settlement condition by other department or other administration	vague answer or no answer	Etc.	Total
Total		17.1	47.7	13.4	7.3	14.5	100
Regional	Metropolitan area	17.6	49.3	12.7	9.5	10.9	100
	District area	16.3	47.1	13.7	5.7	17.1	100
Plant location	National industrial zone	13.2	47.4	17.1	9.2	13.2	100
	Local industrial zone	18.8	55.4	10.3	4.7	10.8	100
	Agriculture and industry zone	13.3	36.7	16.7	6.7	26.7	100
	Residential zone	11.1	51.9	7.4	11.1	18.5	100
	Industrial zone	8.3	50.0	0.0	25.0	16.7	100
	Green zone	11.1	11.1	33.3	0.0	44.4	100
	Quasi-agriculture and forestry zone	22.7	31.8	22.7	9.1	13.6	100
	Etc.	14.3	42.9	4.8	4.8	33.3	100
	Scale	Under 20	11.7	53.1	12.3	8.9	14.0	100
Upper 20- under 100		21.5	43.7	13.8	6.1	14.9	100
Upper 100		11.8	61.8	14.7	5.9	5.9	100

3.1.3 Corporation regulatory costs

All types of costs that the SMEs are assuming due to the regulations amount to 7.2% compared to the revenue. When examined by region, companies based in the metropolitan areas spend 15.9% compared to the revenue, which is six times that of the regional companies (2.8%) because regulations such as limiting the total number of factories in the metropolitan areas that try to curtail saturation of the metropolitan areas is incurring significant cost for the small and medium sized companies located in the metropolitan areas.

When examined by the company size, companies with less than 20 employees (10.9%) spent the most for the regulation cost while regulation cost decreased as the company size increased. As the company size increases, it is easier to secure human resources who can counter-measure regulations, and it is possible to overcome regulatory elements with relatively lower cost. As for the location, regulation cost of the small and medium sized companies that are located at the commercial areas was the highest with 9.1% of the revenue, followed by the companies located at the green land area (7.6%) and quasi agricultural area (7.1%).

<Table 11> A scale of regulatory cost to SMEs (against revenue)

(Unit : %)

Total	Regional		Plant location								Scale		
	Metropolitan area	District area	National industrial zone	District area industrial zone	agriculture and industry zone	Residential zone	Industrial zone	Green zone	Quasi-agriculture and forestry zone	Etc.	Under 20	Upper 20 - under 100	upper 100
7.2	15.9	2.8	6.6	2.2	1.3	6.6	9.1	7.6	7.1	17.0	10.9	4.1	3.3

3.1.4 Counter-plans for Regulations

When companies' management activities face difficulty due to regulations, 55.6% of SMEs said that it is difficulty for them to take any measures, followed by business reduction (18.8%), move to other region (10.1%), business and conversion to different business area (5.9%) in the order listed. From the point of view of the SMEs, the underdogs in the society, they lack the ability to change the regulations or fail to recognize regulations as regulations. Likewise, there are many companies that do not have specific counter-measures.

As for the companies that responded that they are considering move to the overseas, business sell out and closure due to regulation amounted to 7.5%. This shows that the SMEs in Korea may give up business or enter into the overseas markets if regulatory reform does not take place. Entry into the overseas markets by the SMEs in Korea may cause problems such as deindustrialization of

the foundation of the domestic industry and lack of job created. Thus, it is important to know that the regulatory reform is crucial for this juncture.

As for the method for handling regulation, business reduction, and business sell out, closure, and share of move to other region are relatively higher in the metropolitan areas compared to the regions. As for the plants' location, companies in the residential and commercial areas are considering closure more than the companies in other locations because they are more concerned about all types of environment related regulations and due to complaints raised by the residents in the areas at the vicinity. Likewise, companies are seriously considering giving up their business. Although there is no significant difference following company size, companies with at least 100 employees are considering move to the overseas more so than other companies because as the company size continues to grow, they tend to wish to continue business by moving to other region or to the overseas rather than giving up their business.

<Table 12> Counter-plans in continuous regulations

(Unit : %)

		Oversea transfer	Transfer to other district	Convert the type of business	Reduce business	Sale the business	closing	No solution	Etc.	Total
Total		3.5	10.1	5.9	18.8	2.0	2.0	55.6	2.4	100
Regional	Metropolitan area	3.4	10.2	4.3	20.4	2.5	2.2	54.3	2.8	100
	District area	3.6	9.6	7.2	17.1	0.9	1.5	58.1	2.1	100
	Total	3.5	9.9	5.8	18.7	1.7	1.8	56.2	2.4	100
Plant location	national industrial zone	3.0	13.9	5.9	13.9	4.0	0.0	57.4	2.0	100
	District area industrial zone	2.7	8.6	5.2	18.6	0.7	1.7	60.8	1.7	100
	agriculture and industry zone	0.0	9.5	2.4	21.4	0.0	0.0	59.5	7.1	100
	residential zone	0.0	2.9	8.8	20.6	2.9	5.9	58.8	0.0	100
	industrial zone	5.3	10.5	15.8	15.8	0.0	5.3	42.1	5.3	100
	green zone	0.0	20.0	0.0	10.0	10.0	0.0	60.0	0.0	100
	Quasi-agriculture and forestry zone	6.5	9.7	9.7	16.1	3.2	0.0	51.6	3.2	100
	Etc.	10.7	14.3	3.6	21.4	3.6	3.6	39.3	3.6	100
	Total	3.1	9.9	5.8	17.8	1.8	1.6	57.7	2.3	100
scale	Under 20	2.9	7.9	5.9	18.8	2.9	3.8	56.1	1.7	100
	Upper 20- under 100	2.8	10.6	5.6	19.6	1.1	0.6	57.3	2.5	100
	upper 100	13.3	11.1	6.7	15.6	0.0	0.0	46.7	6.7	100
	Total	3.6	9.7	5.8	19.0	1.7	1.7	56.1	2.5	100

In case of a regulation is reformed, investment of SMEs would increase the investment, but it would not be an immediate investment. 65.8% of SMEs answers that they intend to increase the investment if regulatory is reformed. Also 65.8% of corporations intend to increase the investment in 2 ~ 3years, but merely 6.1% of corporation has an immediate investment plan.

<Table 13> Investment plans due to regulation reduction

(Unit : %)

		Expand the investment now	Expand the investment in 1 year	Expand the investment in 2~3 years	Expand the investment regardless regulations	No plan for investment	Total
Total		6.1	13.8	31.9	14.0	34.2	100
Regional	Metropolitan area	6.2	15.0	33.7	8.2	37.0	100
	District area	5.0	12.5	30.3	20.2	32.0	100
Plant location	national industrial zone	4.7	9.4	38.7	13.2	34.0	100
	District-area industrial zone	3.7	9.5	29.1	16.2	41.6	100
	agriculture and industry zone	0.0	19.0	42.9	16.7	21.4	100
	residential zone	6.1	9.1	24.2	12.1	48.5	100
	industrial zone	10.5	21.1	31.6	5.3	31.6	100
	green zone	10.0	20.0	30.0	10.0	30.0	100
	Quasi-agriculture and forestry zone	12.9	19.4	32.3	29.0	6.5	100
	Etc.	13.3	23.3	20.0	13.3	30.0	100
Scale	Under 20	8.6	14.7	28.2	9.0	39.6	100
	Upper 20- under 100	3.5	13.5	33.8	16.8	32.4	100
	upper 100	2.1	10.4	37.5	25.0	25.0	100

If present investment level is defined 100, most corporations, 41% of them intend to increase the investment to 100 ~ 150 level when a regulation is appeased. Also 27.2% corporations say increase the investment up to 150 ~ 200 level, and 9.0% corporations intend to increase more than 200 levels as well.

Corporations which are in the green zone and quasi-agriculture and forestry zone respond increase the investment up to 150 ~ 200 level compare to other zone. In other words, investments are judged to be positive if a regulation is appeased.

<Table 14> Level of investment expanding in regulation reduction (standard level: Present 100)

(Unit : %)

		100-150 level	150-200 level	200-250 level	250-300 level	Upper 300 level	No investment plan	Total
Total		41.4	27.2	5.0	1.1	2.9	22.5	100
Regional	Metropolitan area	45.7	24.1	4.1	1.3	3.5	21.3	100
	District area	37.5	29.5	5.7	0.9	2.4	24.1	100
Plant location	national industrial zone	50.0	18.9	7.5	0.0	1.9	21.7	100
	District area industrial zone	37.9	25.5	4.6	1.4	2.5	28.0	100
	agriculture and industry zone	51.2	31.7	0.0	0.0	0.0	17.1	100
	residential zone	42.4	18.2	3.0	0.0	12.1	24.2	100
	industrial zone	58.8	23.5	5.9	0.0	0.0	11.8	100
	green zone	20.0	40.0	20.0	0.0	0.0	20.0	100
	Quasi-agriculture and forestry zone	48.4	38.7	3.2	0.0	0.0	9.7	100
	Etc.	37.0	22.2	7.4	7.4	7.4	18.5	100
Scale	Under 20	32.5	29.0	5.2	2.2	3.0	28.1	100
	Upper 20- under 100	46.4	25.7	4.1	0.6	3.0	20.2	100
	upper 100	48.8	30.2	7.0	0.0	0.0	14.0	100

3.1.5 Demands of regulatory reform by SMEs

Regulatory reform that SMEs mainly request is to simplify administrative procedures and to improve a statute. The new government's challenging assignment of regulatory reform is to simplify administrative procedures which ranks the highest percentage of 44.5% and legal, ordinance, and rule maintenance (25.6%), limits the new regulations (14.8), Significantly reduced the cost of the administrative operation (4.7%), Maintenance of regulatory systems (3.7%) by the next highest order. Even some corporations request to reform an administrative habitual (2.0%), and improvement of officials' qualities (1.8%)

SMEs make a request to reform the regulation about complex administrative procedure and duplicated documents submission to various department of government. This means SMEs wish to reduce complicated administrative procedures by system innovation. Additionally there is other strong request, which is reduction of building an unnecessary laws or regulations by another law or regulation.

Research shows metropolitan area has stronger regulation reforming request than district area, on the other hands, district area SMEs has stronger request, which is simple administrative procedure than metropolitan area. It is the result that district area SMEs has more difficulties by administrative procedure and various self-regulations.

<Table 15> Request list of regulatory reform of SMEs

(Unit : %)

		Limit the new establishment of regulations	Maintain Legal regulations, rules	Simplify administrative procedures	Reduce the cost of administration	Regulatory system maintenance	Expand the regulatory information provide	Reform the administrative habitual	Officials quality improvement	Etc.	Total
Total		14.8	25.6	44.5	4.7	3.7	2.3	2.0	1.8	0.6	100
Regional	Metropolitan area	18.2	25.6	37.8	5.7	4.2	2.4	3.0	3.0	0.3	100
	District area	11.8	25.4	51.5	3.8	2.4	2.4	1.2	0.6	0.9	100
Plant location	National industry zone	13.9	29.6	38.9	7.4	3.7	3.7	0.9	1.9	0.0	100
	District area industrial zone	14.6	20.7	52.0	3.7	3.4	1.7	1.4	1.7	0.7	100
	agriculture and industry zone	14.6	22.0	46.3	4.9	2.4	4.9	2.4	0.0	2.4	100
	residential zone	8.8	20.6	47.1	11.8	2.9	0.0	2.9	5.9	0.0	100
	industrial zone	10.0	10.0	35.0	10.0	15.0	10.0	10.0	0.0	0.0	100
	green zone	10.0	60.0	20.0	0.0	0.0	0.0	0.0	10.0	0.0	100
	Quasi-agriculture and forestry zone	23.3	26.7	40.0	6.7	3.3	0.0	0.0	0.0	0.0	100
	Etc.	7.1	32.1	53.6	0.0	3.6	0.0	3.6	0.0	0.0	100
Scale	Under 20	13.3	24.6	46.3	4.6	2.9	3.3	2.1	2.1	0.8	100
	Upper 20-under 100	15.8	26.0	45.0	4.6	3.8	1.9	1.3	1.1	0.5	100
	upper 100	17.4	28.3	41.3	6.5	2.2	0.0	2.2	2.2	0.0	100

3.2 Examples of Management difficulties due to regulation

The cases are analyzed and arranged with regulatory effect to the SMEs by visiting the site directly since 2008 May ~ July

Classification	Details on the regulation
Environment related regulations	<ul style="list-style-type: none"> - SMEs recognize the need for environment regulation, but their dissatisfaction level is high due to the irrational system operation - Assumption of the waste materials for the recyclable products that are not hazardous materials - Work handling method centered on the administrative convenience such as levying penalty without offering prior education and recommendation for correction - Many companies face difficulty in complying with the regulations since there are many supervising institutions, and they need to prepare back-up document on assuming the cost of handling waste material by the type of ingredients for the product production - Environment regulation related functions are dispersed to various institutions, and the reality is such that the overlapping monitoring and standard for regulation is different by each institution
Location related regulations	<ul style="list-style-type: none"> - SMEs expect significant impact on the company management due to the forced move resulting from the development of new city in the area where there are many plants and due to the development based on the division of land into specific parcels to obtain permit regulation - Due to the development based on the division of land into specific parcels to obtain permit regulation set for the environment protection, numerous companies cannot use the idle land at the vicinity. Instead, they construct new plants in other regions - While developing new city in the area where there are many plants, existing plants are accommodated in a forced manner, while paying the existing companies a very low sum for compensation that makes moving impossible
Start-up related regulations	<ul style="list-style-type: none"> - During the start-up process, request is made to submit excessive amount of documents or to submit same documents repeatedly - To start-up business, it is necessary to submit 30 documents to at least seven institutions by visiting them in person - 17 out of the 30 documents for submission are repeats of the same document and they need to be submitted to the five institutions in a repetitive manner - 168 days and 46 Million Won required to start up business due to the regulation that prohibits use of similar business names, and the system that requires specific amount of capital - If plant is constructed in a separate location, period for the plant establishment ranges from 322 to 405 days and there are about 54 relevant regulations - As for the stages for plant establishment, these are required; □ 90 days to select plant's location, □ 35 days to prepare for the plant establishment, □ 30 days for applying for and getting approval for the plant establishment, □ total of 164 to 247 days for plant construction and, □ three days for report completion - Excessive cost is incurred due to the delegation of plant establishment to a specialized design office

Labor related regulations	<ul style="list-style-type: none"> - Excessive burden on the companies on dealing with foreign worker employment and management - Re-entry after leaving for one month after foreign workers work for three years after employment - Increased cost due to the need to increase minimum pay as well as provide dorm, food, insurance against industrial accident and injury, travel cost etc. - Despite the impeccable supervision of the foreign workers, if they run away, presidents of the SMEs need to assume the responsibility for decrease in the allocation of foreign workers - In relation to the certification and business permit, rigid system operated in relation to the labor related regulations - In case of environment business, companies are required to hire water quality related environment specialist when obtaining permit for the water quality environment business, water quality environment specialist, electrician, industrial sanitation technician and mechanical engineer - Companies need to hire atmospheric environment technician, atmospheric environment technician, electrician, industrial sanitation technician and mechanical engineer even when obtaining the permit for the atmospheric environment processing business - If a company is engaged in two businesses, the company needs to hire specialized human resources by each business
Tax related regulations	<ul style="list-style-type: none"> - Tax audit related regulations such as the tax audit target and selection criteria are not clear. Thus, small and medium sized companies are dissatisfied and concerned about the tax audit - In case of very small sized companies, it is difficult for them to identify accurate information on the new and modified taxes due to the lack of specialists and they are bound to be on the losing end due to the failure to counter-measure effectively - Extensive time and human resources are required to prepare for the tax audit, and difficulty is aggravated due to the forced audit conducted by the auditors - Ad hoc tax audit is conducted by visiting the companies all of the sudden without prior notification to search all the offices and to confiscate the documents which usurp operation - To prepare for the tax audit, employees need to stop company operation literally, and company management is hurt seriously since it is difficult to check the documents - When a client visits the company under audit, transaction may be stopped due to the sudden tax audit. Likewise, company's reputation may be critically damaged - Request for the documents that can be obtained by the administrative institutions, autonomous regional entities' related departments themselves and on the national tax information network (example: receipt for payment, all types of reports etc.) - Unfavorable treatment when the companies cannot come up with the data that are over five years old

Plant expansion related regulations	<ul style="list-style-type: none"> - Difficult to expand the plant to suit the company size by reducing the plant's building coverage - Impossible to establish plant on the intended land since the usage for the land is changed while plant is in operation - At the time of the establishment, the building coverage was 40% since the area is quasi agricultural area, but the land is then changed to the green belt area according to the "law on the planning and utilization of the national land" with the building coverage decreasing to 20% which means that it is impossible to expand the existing plant (30%) - The space that is lacking is offset by building provisional building structure (tent), but inconvenience results since this has to be reported every year, and additional cost for storage and re-installation may incur when the provisional structure is damaged due to heavy rain or typhoon
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As the business environment becomes worse and rules and regulations are introduced or enhanced, business activities of the small and medium manufacturing industry shrink.

The business environment of the SMEs is getting worse due to various regulations on environment, safety supervision and approval.

Introducing and rigidly enforcing regulations aggravate the situation in running a business, and thus these enterprises become more discontented because of the fact that the law is applied for controlling and administrative convenience. The bigger problem is that regulating is done for administrative convenience or the execution procedure is put first. As a fine is imposed right after being prosecuted even for a light violation without a correction advice or education being given, this brings more and more complaints and reveals that quite a few regulations do not reflect the reality of industrial settings. Regulations should be corrected in user side, so that users can abide by them in industrial settings.

It is very likely that when business activities are shrunk, the competitiveness of the SMEs weakens and this causes to weaken the industry foundation in our nation as well. Therefore, resolutions, which could lighten restrictions, should be taken sooner.

□. Regulation reforming methods for strengthening the SMEs competitiveness

4.1 SMEs Administrative cost reduction

The administration burden arises when enterprises submit various data in order to comply with the duty to supply information due to the government regulations. Countries in the EU estimate the administration burden/cost of enterprises by using SCM (Standard Cost Model) and try to reduce the cost based on this model. To increase the competitiveness of the SMEs, therefore, we should set a goal on how much we will reduce the cost and should present a specific plan and assess the result.

A program is required to reduce systematically this burden like a varied report and research, which are obstacles in business activities of the small and medium enterprises. We need to set the goal, which reduces 30% of the administration cost 5 years hereafter and to make a policy on how and when to remove inappropriate regulations.

This cost is estimated in two sides: one is to measure the cost the government shares and the other is to measure the cost the SMEs bear for observing the regulations. We need to be aware that in case there would be no cost for a government, no cost related regulations could arise. The small and medium enterprises should consider the cost arisen from the administrative restrictions as the cost because opportunity cost arises.

In many cases the cost for approval is not included in the cost, but this must be a burden for the SMEs. The government, hence, should measure the administration cost and calculate the value of money considering the time value of money, and then she must make an effort to reduce it. The important thing is to make the procedure easy rather than to simply reduce the number of regulation. In order to do so, the form for approval needs simplifying and information sharing systems are also needed. Considering the administrative regulations burdens the SMEs, the government should guarantee free access to the service, which makes the SMEs possible to deal with more administrative work. This service could be provided by the government or a private sector supposing that the government should pay for enterprises which do not get small benefit.

It is needed to reconsider the ability of officials in central ministries and agencies and local governmental organizations, and to make them recognize how important the fact that the administrative regulations should be reduced through various educational trainings. The government should try to find successful cases and make officials change their thought on this issue. Also, our government should educate and support the SMEs enough to improve their internal systems by themselves and to reduce the administration cost in the end.

4. 2. SMEs-friendly Regulatory Impact Assessment (RIA)

RIA is a system to assess the regulatory impact on laws, ordinances and policies in advance when they are established or amended in order not to be disadvantageous to the SMEs.

In the USA, since 1976 this assessment has become effective to protect the SMEs when a law was made and the ministry of SMEs issued the rule of improvement order. Monitoring has also been done after this assessment. The SBREFA (Small Business Regulatory Enforcement Fairness Act) requires an agency to prepare and make available to the public. From 1980 when the RFA (Regulatory Flexibility Act) was established, it required federal agencies to review regulations for their impact on small businesses and considered less burdensome alternatives and focused on establishing a positive circulation structure through the growth of the SMEs.

<Table 16> Summary of expense reduction SMEs (A fiscal year 2008)

(Unit: dollar)

Regulation / intervention	First year cost	Annual cost
Verizon request (FCC)	393,900,000	
Vehicle painting work and equipment (EPA)	172,000,000	
Steel corporation atmosphere contamination standard (EPA)	4,940,000	1,003,000
Restrict the spread SPCC & 2 nd level of limitation of counterplan (EPA)	291,000,000	291,000,000
Understanding relationship (SEC)	414,252,000	
Assigner moral regulation (DOD, GSA, NASA)	5,301,630,000	
The law of Shabane-Oxley 404 (b) row extended (SEC)	1,957,225,008	
Black-box and digital flight data recording device regulation (FAA)	289,000,000	13,650,000
Metal treat & final operational standard (EPA)	1,015,000	1,015,000
Bureau Supply example 2006-011	18,800,910	18,800,910
Reservation request of quest (FCC)	1,140,317,713	1,140,317,713
Digital TV broadcasting transfer (FCC)	160,000,000	160,000,000
Monitoring regulation (EPA)	114,000,000	114,000,000
Restrict the harmful material for Bidro-engine ignition spark (EPA)	5,000,000,000	5,000,000,000
Total	10,758,080,631	2,239,786,623

FCC - Federal Communications Commission, EPA - Environmental Protection Agency,
SEC - Securities Management Committee, NASA - National Aeronautics and Space Administration,
FAA - Federal Aviation Administration
Data: Report on the Regulatory Flexibility Act FY 2008

Federal agencies have observed this act and kept informing the national policy agency of regulations newly made in opening the RFA policy to the public. So when new regulations come out, they are quite different from the original ones as the status of the small and medium enterprises is fairly reflected. As a result, it is estimated that the SMEs could reduce the cost of around \$11 billion in the fiscal year of 2008.

Making a new act is urgently required in Korea as well, which reflects weakness abilities of the SMEs. No discussions to differently access to the regulations have been made even on the policy for fostering growth of the SMEs.

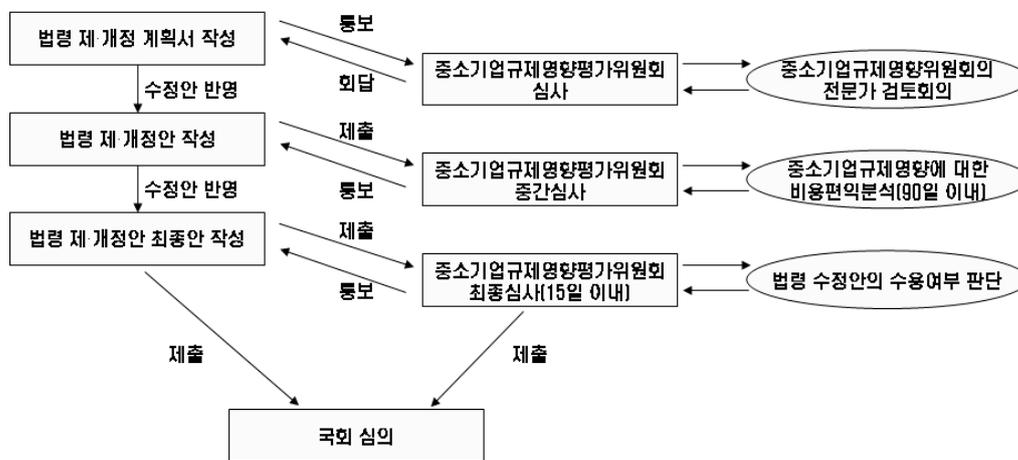
Alternatives should be made to strengthen competitiveness of the SMEs and they should be also made a different application of the existing regulations considering the ability of the SMEs. Through the RIA, it is needed to analyze the CBA and to lighten the burden on regulations.

The RIA especially should be done for regulations, which are newly made and try to extend the period and then the government makes environment entrepreneurs to do their job properly. An organization, which has a strong power and can support and observe the RIA, is needed. It is

appropriate that the small and medium business administration is in charge of RIA and the ministries and agencies are informed of a written opinion when laws are established or amended. It is, therefore, recommendable that the small and medium business administration should operate the committee for the RIS.

The committee for the RIS analyses the impact onto the SMEs when laws are established and amended and protects the enterprises. The primary goal is to minimize disadvantages for the SMEs through the RIS. In case the ministries and agencies intend to establish or amend laws and a proposal is presented to the manager of the committee for the RIS, the committee should analyze the impact onto the SMEs and send it to the right office.

<Figure 2> Policy process for SMEs appeasement of regulations



The process of evaluating impacts from the regulation of small and medium business should be realized throughout all processes from the new establishment and revision of laws to the consideration of the National Assembly.

The committee of assessing impacts from the regulation of small and medium business should deliver their opinions continuously from the planning stage to the final stage of the new establishment and revision of laws in order to minimize expenses of small and medium business occurred from the new establishment and revision of laws.

A governmental agency should be required to submit the result of reflecting a modification request from the committee to the committee in stages. A corresponding government agency should be required to reflect opinions from the committee to contents of new establishment or revision after preparing the new establishment or revision of laws.

4.3 Strengthening application of sunset regulation

Sunset law is a system of establishing time limit of continuance for a newly established regulation and deciding discontinuation or continuation of an applicable regulation at the end of time limit by examining the validity of that regulation. It is prescribed that the chief of central administrative organization shall establish and clarify time limit of continuance for a regulation with no clear reason of its continuation on the competent law at the time of newly establishing or reinforcing regulations. (Article 8 from the fundamental laws of administrative regulations)

Our country clarifies time limit for regulating business by introducing sun-set law from 1998. But, sun-set law is not being utilized effectively since the number of regulations with established time limit among 2,549 regulations newly established after 2000 was just 48 which is just 1.9% in percentage.

<Table 17> Status of annual established time regulations

Description	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	□
New regulatory count	76	394	520	318	337	204	254	297	127	22	2,549
Continuous period set	0	4	13	11	2	7	2	9	0	0	48

Data: Korean Chamber of Commerce, regulatory Sun-set law operation evaluation and improvement direction (2007)

Most of regulations with a great influence don't have an established time limit of continuance, and most of regulations with established time limit of continuance are regulations with no importance. The reason why sunset law is not established firmly is because government employees interpret regulations passively due to concerns for the administrative responsibility. They can't really apply sunset law in a decisive manner due to the responsibility for the same problem occurred after the regulation is settled. This is the result from not reflecting changes in regulatory contents according to the change of period through selection and concentration.

Therefore, it is necessary for us to suspend a regulation with completed effectiveness in a decisive manner by introducing sunset law for newly established regulations in future. Similarly to newly established regulations, we also should establish a system of applying sunset law to previous regulations of registration and reexamining regulations periodically.

Economic regulations should be assigned as a target for applying sunset law in principle from the side of respecting functions of market. The majority of economic regulations conform to area of public benefit, but it should be converted into a policy of protecting public benefit by reinforcing self-control capability in the market. A policy for reinforcing control capability of market should deliver regulations only for the purpose of establishing order of market within a certain period of time and it should be converted after the order of market is established so that competitions could be stimulated.

The enforcement of sunset law should be consolidated by clearly prescribing items for applying sunset law through the modification of fundamental laws of administrative regulations. The system should be reinforced by stipulating items for applying sun-set law so that a corresponding person for drafting policies could regulate the period of applying regulation when establishing policies.

Sunset law should be applied by reexamining the overall previous regulation of registration. It's required to examine appropriateness of regulations by selecting regulations required for applying sunset law among regulations registered in the commission of regulatory reform. The analysis of appropriateness of regulation should be conducted by outside professional agency and opinions from the corresponding agency should be collected on the process of analyzing appropriateness of regulations. A committee for examining appropriateness of regulations needs to be organized in order to achieve this goal. The examination for appropriateness of regulations can be conducted by outside professional service agency, and the committee for examining appropriateness of regulations only needs to make a final decision. After completing the analysis for appropriateness of regulations, the committee for examining appropriateness of regulations can just decide the continuance of regulations and the application of sunset law by consulting with a corresponding government agency.

4.4 Adopting a SMEs regulatory differentiation

In case of SMEs facing difficulties recently due to economic crisis, expenses required for observing regulations are their heavy burdens.

It is necessary to consider a plan of reducing the burden of small and medium business in comparison with large enterprises by considering their reality of limited energy for dealing with regulations. A measure for reducing the burden of small and medium business should be prepared even for matters related with national health, industrial disasters and safety within the range of not significantly interfering human rights and health rights of citizen.

It's required to apply regulations selectively, to relax regulations or to give a grace period to small and medium business until they are properly developed, and the differentiation of regulations should be carried out gradually.

The differentiation of regulations is a policy for small and medium business being also utilized frequently in advanced countries recently. U.S excludes or differentiates small and medium business from 50 environmental regulations. England also conducts the differentiation of regulations through self-regulation at the level of association on the fields of financial services, advertisements and insurance. Therefore, it's required to reduce operational responsibility of small

and medium business for promoting the development of small and medium business with insufficient manpower and fund by introducing the differentiation of regulations.

4.5 Build the regulatory reform system for SMEs

In the meantime, regulatory reform has been delivered from the point of view of regulation makers so that the standpoint of small and medium business, which is the user, could not be reflected and regulatory reform couldn't be applied widely. In order to overcome this disadvantage, regulatory reform should be delivered from the point of view of small and medium business.

Institutional supports should be delivered so that overall opinions could be collected from small and medium business as well as the interested parties under direct influence of regulations without any filtration and these opinions could be examined carefully. Opinions should be collected and reflected from the beginning stage of establishing the regulation. In order to achieve this, any draft that is expected to give a large influence to small and medium business should be announced sufficiently in advance.

Various methods and channels should be found for methods of collecting opinions. Our country needs to establish a structure or a system for utilizing internet with excellent infra. Windows for collecting opinions such as the establishment of channel between the government and organizations or companies related with small and medium business should be diversified. In order to achieve this, it's required to organize periodic meetings for hearing voices from small and medium business. It's desirable for us to terminate unnecessary regulations for small and medium businessmen through periodic town meeting with small and medium business.

An organization of drafting regulations should carefully evaluate and reflect opinions from presented interested parties as well as small and medium business, and respond well to those opinions. This organization should express its standpoint for a reason of reflecting or not reflecting an important opinion. All presented opinions don't need to be reflected, but we need to make an effort for reflecting as many opinions as possible from the positive standpoint.

On the other hand, it's required to install and operate a support center for providing administrative services to small business with less capability of collecting information of regulations. This support center should support small and medium business not to be disadvantaged from various regulations by analyzing and providing information of regulations according to characteristics of a company according to the type and location of business.

□. Conclusion

The Korean government has put lots of efforts on reforming regulations, but it does not still have much less influence on the industry field in small & medium enterprises(SMEs).

The results of analysis show that the regulations reduce the investments and affect the management of corporations. For instance, the management regulations affect moderately such industries as working environments, human resources, and labors. But they have the most severe effect on the investment in plant and equipment.

The result indicates that if regulations are not improved, a number of SMEs consider cutting down, shutdown, overseas transfers, or sale of their business. Therefore, it comes out that what most of the SMEs request is to reduce such regulations as complicated administrative procedures (red tapes).

While appropriate regulations lead to desirable economic development of our society, excessive regulations disturb the corporations' profit pursuit, deteriorate the entrepreneurship, and disturb creativity. SMEs' weak countermeasure ability toward regulations and excessive regulations make serious damages to them. As a result, these adverse factors result in cost increase, investment shrinking, and reluctance to launch new businesses of SMEs.

To strengthen the competitiveness of SMEs, epochal regulatory reform is most needed through the idea of conversion. Current positive regulatory approaching method, 'Prohibited in principle, allowed in exceptional cases', should be transferred to negative method, 'Accepted in principle, prohibited exceptions.' We should make a good environment for corporation-friendly management by reducing unnecessary regulations, and encouraging the creativity and challenge of SMEs.

Continuous and institutional regulatory reduction must be provided instead of partial and temporary regulatory reform by government. The SMEs' efforts are important in itself. It is the right times that voluntary efforts to overcome regulations are most needed to avoid the passive actions past traditional purpose of the business.

[Citation]

- Kyungki Development Institute (2007), Analysis of the economic effects of the regulations of metropolitan area
- Prime Minister Center(2009), “Comprehensive plan in 2009 the Regulatory Reform”
- Regulatory Reform Committee(2007), “2008 regulatory reform guidelines”
- Regulatory Reform Committee(2000~2007), Regulatory Reform White Paper
- Kim sin (2005), Administrative regulations to enhance the quality, Korea administrative institute
- Kim sin (2005), To ease regulatory burden of SMEs, Korea administrative institute
- Kim jong seok (1999), Regulatory reform and regulatory reform to improve the system, the direction of development, Regulatory Research
- Kim Hui suk (2001), Innovative Corporation Regulatory Reform for environment, Industrial Research Institute
- Chamber of Commerce (2007), “Recent changes of Japan that regulations of Japan and policy”
- (2007), “Deregulation of the U.S. system of SMEs”
- Park Nam-kyu Han Jae-hoon (2008), “The growth of SMEs, entrepreneurship and the internationalization strategy of the corporation to consider the impact”, SMEs research, 30th edition4, Korea SMEs Committee
- Bae jong-tae, Cha Min-suk (2009), “Entrepreneurship expansion and enabled”, SMEs research 31st line 1, Korea SMEs Committee
- Industrial Research Institute (2001), Innovative corporation Environment for Regulatory Reform
- Industrial Research Institute (2002), Regulation of growth of knowledge-based reform
- Yang Hyun-bong (2006), “Established to promote business and improve the system”, SMEs Research 28th edition 4, Korea SMEs Committee
- Lee Jong-wook (2007), “Financing difficulties of SMEs and measures of Korea”, SMEs research , 29th edition 4, Korea SMEs Committee
- Lee Joo-sun (2007), Regulatory reform measures to improve system , Korea Economic Research Institute
- Lee Joo-heon (2008), “Research on motivation and decision-making foundation established”, SMEs research 30th edition 1, Korea SMEs Committee
- Lim Sang-joon (2005), The direction of reform and development of regulatory policies, Korea Economic Research
- Cho Min-kyung, Kim Seung-chul(2008), “Korea government policy for SMEs competitiveness analysis”, SMEs research,30th second edition, Korea SMEs Committee
- Jeong dae-yong, Yoo bong-ho (2007),“Entrepreneurial orientation and market orientation and its impact on the organization and business validation”, Venture management research, 10th second edition Korea SMEs Committee
- Cho byung-sun(2008), “Status and problems of the SMEs Legislation”, SMEs research 30th edition 4 Korea SMEs Committee
- Cho I-hyun (2008), corporation to improve competitiveness, the innovation of new models, SMEs research Institute
- SME administration (2008), SMEs Regulatory impact analysis on the operating conditions, and case studies developed research
- SMEs Task Force Committee SME administration (2005), □ Research on the regulation of innovative SMEs in industrial zone□
- Cha Moon-jung (2005), corporation Regulatory reform to improve the environment for research, KDI
- Korea regulatory Committee (2008), Achievements and challenges of regulatory reform debate Resources
- Huh Jae-wan (2008), “Investment plan for the metropolitan area deregulation”, Chamber of Commerce

Better Regulation Task Force(BRTF)(2002). Employment Regulation - Striking a Balance. U.K

(2003). Principles of Good Regulation. U.K.

Chadwick, M., Binks, M., Rose, L., Eagles, R., Third, R.(2004). The Impact of Regulation: Results from Two On-line Surveys. ISBA.

Chittenden, F., Kauser, S. and Poutziouris, P.(2003). "Tax Regulation and Small Business in the USA, UK, Australia and New Zealand." International Small Business Journal, 21(1): 93-115

Darrell Porter(2001). Simplifying business regulations, First Workshop of the PEC-OECD Co-operative Initiative on Regulatory Reform

General Accounting Office(1998). Regulatory Reform: Implementation of the Small Business Advocacy Review Panel Requirements. Washinton, D.C.: GAO.

Hebert, R.F, & Link, A. N.(1988), The Entrepreneur, mainstream Views and Radical Critiques.(2nd Ed.). New York:Praeger.

OECD(2002), Regulatory Policies in OECD Countries, Public management Committee, OECD, paris

OECD(2005), Product Market Regulation and Productivity Growth, Working Party No.1,Economic Policy Committee, Economics Department [ECO/CPE/WP1(2005)16], Paris: OECD

Quartey, Peter(2001). Regulation, Competition, Competition, and Small and medium Enterprises in Developing Countries. University of Manchester

Shleifer, A., and R. Vishny(1994), Politicians and Firms, Quarterly Journal of Economics 109

Small Business Research Center(2005). Regulation and Small Firm Performance and Growth. Kingston University.

Djankov S. R., La Porta F., Lopez-de-Silanes, and A. Shleifer,(2000), The Regulation of Entry, Harvard Institute of Economic Research Discussion Paper No.1904

Policy tools of government and innovation enhancing factors for small firms

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We surveyed 1923 Korean small firms and tested proper policy tools for strengthening their innovations. Policy tools of government have a strong impact on small firms' continuance or collapse. We classified policy tools as regulation, education, human resource, and technical development supporting. We supposed that policy tools of government influence the firm size, exportation type, and the firm's innovation output discriminatively. Also, we assumed small firms interested in innovation prefer material supporting, such as grants, loans, and loan guarantees.

As a result, to enhance innovation capacity, small firms are fond of education, human resource, and technical development supporting in the long run. This study also presented proper policy tools for developing small firms' innovation and enhancing entrepreneurship of small firms.

Track: 3. Entrepreneurship and Public Policy

Mainstreaming Local or Targeted Business Support Initiatives

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Mainstreaming is a popular concept in business support policy. Generally, mainstreaming refers to the creation of widespread benefits, from localised or targeted initiatives, through a process of policy transfer. However, criteria are needed for assessing the feasibility of mainstreaming specific initiatives effectively. This paper clarifies the concept of mainstreaming and presents a framework for assessing the desirability and feasibility of mainstreaming business support initiatives. The methodology involves a literature review and an examination of a number of case studies, to identify the characteristics which make such initiatives mainstreamable. The paper offers recommendations to analysts interested in assessing the scope for mainstreaming business support initiatives.

Track: 3. Entrepreneurship and Public Policy

Competition and the Small Business Sector

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Abstract

This paper examines the nature of small business in the context of competition policy, regulation and enforcement. Small firms represent over 90% of all business enterprises in most countries, with micro-firms and the self-employed being the largest single group of trading organisations. SMEs differ from large firms not only in terms of size, but also in their resources and decision-making. In comparison to larger corporations, small firms tend to be geographically limited, possess a limited product and service range, have a restricted market share, suffer from information asymmetry, are less likely to access established suppliers, and have limited access to specialised legal and economic advice on competition matters. Accordingly, regulators and policy-makers need to be aware of the challenges involved in developing effective outreach strategies, detecting breaches and non-compliance of competition laws by SMEs, the extent to which they rely on self-regulation as a compliance tool, the proportionality of fines and penalties that they impose on SMEs for breaches, and the treatment of the self-employed who use a formal business structure. The paper also identifies some areas of future research into the relationship between small firms and competition regulation.

Keywords:

competition, deregulation, small business, micro-business, SME, entrepreneur, antitrust, trade practices, research

¹ The views expressed in this paper are those of the author only and do not necessarily reflect those of the Australian Competition & Consumer Commission (ACCC) itself.

1. Introduction

Small businesses constitute over 90% of all trading business enterprises across the developed world, yet they are a paradox: for all that they are like any other business corporation, they are also fundamentally different types of enterprise. As a sustained body of research now demonstrates, micro, small and medium-sized enterprises are often managed in quite different ways to those of the conventional large modern corporation. They can have quite different goals and operating processes, and be driven by factors well outside the conventional profit-maximising model.

This poses conceptual and practical problems for regulators, legislators and policy-makers. How do we ensure that laws and frameworks are devised which treat all businesses equally, yet still take into account the unique nature of small enterprises?

This is a central question in the evolution of competition regulation, yet one which has received little attention to date.

This paper examines the nature of small business in the context of competition policy, regulation and enforcement. It begins by providing the reader with an understanding of the characteristics of small firms, and how they differ to large businesses. It then examines some of the issues which small firms face in a competitive environment, and the ways in which competition policy can affect them, either for better or worse. *Inter alia*, it makes some recommendations for competition agencies to consider when dealing with the small business sector. Finally, it also discusses the need to develop a greater body of evidence-based research about competition and the small firm sector, and identifies some key areas in which more information is currently required.

2. Characteristics of Small Business

What, exactly, is a so-called “small business”, and how does it differ from other types of business enterprise?

Formal definitions differ from one country to another, but in general it can be classified as a “...small-scale, independent firm usually managed, funded and operated by its owners, and whose staff size, financial resources and assets are comparatively limited in scale” (Schaper & Volery 2007, p.82). Such businesses are not the subsidiaries of larger corporations, nor the trading arm of a government enterprise or not-for-profit organisation. Instead, they are usually firms established by one or two individuals for the purposes of their own economic and social gain.

The term “small business” is often thus used to describe a variety of different enterprises, including self-employment projects (firms whose only staff is the business owner), micro-firms (with nil or only a handful of employees), and sometimes even medium-sized enterprises (hence the commonly used phrase “small and medium-sized enterprises” or SMEs).

A key issue to consider is that the phenomenon of small business has both a quantitative and qualitative element. Quantitatively, firms are often said to be small because they possess only limited amounts of capital, staff and/or assets; that they

only have a relatively low total annual sales revenue or turnover; or that they have only a small share of the market in which they operate. Typically, this usually means that they have only a limited number of employees, and restricted financial resources (in most cases, the owners themselves will have contributed or borrowed most of the operating capital). As is discussed further in this article, all these factors can have significant implications on the firm's ability to deal with external challenges.

The qualitative component of a small firm refers to the more subjective (yet equally important) aspects of its goals, strategies, internal organization, decision-making and operating processes. The owner of the business is usually also its manager; relatively few small firms are run by professional managers in place of an absentee entrepreneur. The owner's work experience, enthusiasm and business vision are frequently the key to the success or failure of the whole firm. The main decision-making functions are usually exercised by its owners; for them, personal goals (such as lifestyle considerations, limiting the number of hours worked, or providing opportunities for family members) may be more important than simple profit optimisation.

All of these behaviours are quite different to the conventional large-scale corporation, where there is a primary emphasis on maximising shareholder value and profits; where there are significantly more human and financial resources available for use; and where decision-making and organisational structure is more likely to be formalised and structured, rather than the ad-hoc approach traditionally favoured by most SMEs. Table One (shown at the end of this paper) summarises some of these differences in more detail.

Globally, small businesses represent the majority of all business trading enterprises. Recent counts of small business indicate that they typically represent over 90% of all firms, and the very smallest of firms – micro-enterprises – typically account for at least 75% of all businesses (OECD 2008).

Table Two (also given at the end of this paper) provides a summary of the distribution of private sectors by size across a number of key developed economies. As has previously been noted (Schaper 2006; Schaper, Dana, Anderson & Moroz 2009), the distribution of firms in most stable open-market economies is such that SMEs appear to account for no less than 95%, or nineteen out of every twenty firms in existence. Conversely, large firms rarely exceed a "1 in 20" distribution rule. Micro-firms predominate over all other firms, giving rise to a pyramid-type structure in each economy where large businesses are the numerically smallest cohort. And although there may be some minor variations in figures from one time period to another, the above two patterns appear to be relatively fixed and enduring from year to year.

Some other key aspects of the small business sector are also important to bear in mind when understanding how such firms are created, operate and eventually cease trading. Over the last two decades, a growing body of small business research and demographic analysis has emerged which indicates that SMEs frequently have the following characteristics (Schaper & Volery 2007):

- *Limited life spans* – most exist for no more than 15 years at best
- *High rates of exit* – many firms fail to survive beyond the first few years, and

- the owner must therefore exit the business venture
- *Low levels of net profit* – many in fact generate nil or negligible returns on investment
- *Home-based businesses* – most small firms operate out of the home of the business owner, rather than in conventional business premises
- *Family businesses* – many enterprises are run by one family, who work in it, share the financial risks and rewards, and make the key decisions
- *Part-time operations* – many firms, especially micro-enterprises in the personal services sector, are run for only a limited number of hours a week
- *Portfolio careers* – many SMEs can form just one part of the owner’s overall “portfolio” of income-generating work, other parts of which may include paid employment with one or more conventional employers

3. Competition Within The Small Business Context

If there is one field where there is a fairly explicit and clear consensus between competition and entrepreneurship theorists, it is the nexus between enterprise and the open market (Golodner 2001). Free, fair and open competition is central to entrepreneurship. It allows new, small and dynamic firms to gain access to markets, to introduce new innovations to consumers, to offer greater choices to purchasers and – if they provide the right type of product or service at the right price – can enable them to flourish (Audretsch, van Leeuwen, Menkveld & Thurik 2001). Such a notion is at the heart of the work of one of the founding fathers of modern entrepreneurship theory, the Austrian economist Joseph Schumpeter, who termed the phrase “creative destruction” in regards to the competitive marketplace in which more efficient and effective firms survive and thrive, whilst displacing less successful enterprises. This notion has been taken up by most of his successors since then, and is often also espoused by many competition policy-makers.

Although it may be hard to prove a causal link between the competition and entrepreneurship, some aggregate business demographic data lends credence to this argument. Data from several nations who have undertaken large-scale competition reforms, and who also keep accurate counts of their business population, show that the number of small firms has indeed grown since the introduction of open market strategies. As Table Three at the end of this paper indicates, even in advanced market economies such as Australia, significant reforms over the last twenty-five years (such as the adoption of a national competition policy and broad-scale deregulation) have lead to a substantial growth in the small business sector. Such data suggests that the small business community, as a whole, does not fade under open markets – it can flourish.

However, in practice small firms face particular issues when dealing with competition policies and regulations. Some of these can place a small business at a relative disadvantage, whilst others can provide a source of comparative advantage.

As a number of researchers have indicated (US SBA 2008; Australian Bureau of Statistics 2007; Gunningham 2002; Neumann 2001; Curran & Blackburn 2001), it is worth noting that small firms are:

- *Geographically limited* – the most common form of business has only one

working location; only a few have two; and very few small firms can be truly classified as having a wide footprint.

- *Possess a limited product and service range* – most enterprises sell only a very limited range of goods and services, unlike large corporations.
- *Limited market share* – unless they deal in a very specialised industry niche, most small firms will individually have only a small part of the available market in a particular product.
- *Subject to high levels of churn* – given the high numbers of new businesses created each year, as well as those that exit, there is a high level of turnover in the number of businesses operating each year.
- *Suffer from information asymmetry* – small firms are less likely to access government information, education and assistance programs than larger firms. They remain “out of the loop” when it comes to receiving information about changes to the legal environment, regulatory reforms and compliance assistance schemes.
- *Less likely to access established suppliers* – many large producers of goods and services are reluctant to provide access to small firms, since their reliability is untested, viability is unknown and financial risk can be high.
- *Usually unincorporated* – most small-scale enterprises do not adopt a company structure, but prefer to operate as unincorporated sole traders, partnerships or trusts. As such, they are often exempt from many of the reporting and compliance requirements imposed on trading corporations.
- *Have limited access to skilled advice* – new and small firms rarely utilise external advisers apart from accountants.

Competition policy-makers face a two-edged sword: on the one hand, they seek to create a level playing field in which all firms and individuals have an equal opportunity to compete; on the other, though, is the realisation that a purely “open slather” environment can often work to the disadvantage of many SMEs, who have neither the resources nor capability to effectively compete with larger corporations. Indeed, the recognition that many SMEs (especially new, small and micro-sized firms) operate at a comparative disadvantage was one of the original arguments in favour of the introduction of antitrust laws, and remains so today (Foer 2001). However, this poses a fundamental issue for competition authorities: do they operate in a manner which ensures the freest, most open and competitive market possible (treating all firms as essentially equal competitors), or do they attempt to sensitively manage the competition framework so that small firms are not disadvantaged (even though this may in itself occasionally distort the operations of the market, produce inefficiencies and lead to detrimental outcomes for consumers)?

4. Issues For Regulators And Policy Makers to Consider

The very different nature of small firms, and the fact that they cannot always be treated in the same manner as a large corporation, poses some challenges for the operations of contemporary competition policy-makers and regulators.

Outreach. Information and education have long been seen as crucial tools in developing a culture of trade practice compliance. But whilst it is relatively easy to reach out to the corporate sector (which has a comparatively small number of members), how does a regulator develop a communication and information

dissemination strategy to a sector that, in most countries, comprises several hundred thousand firms? This problem is exacerbated by the fact that so many small enterprises are unincorporated entities, are home-based, and are unlikely to be members of an industry association.

Churn. As was noted previously, the SME sector in most countries is marked by a large number of new business entries and exits each year. In Australia alone, for example, some 334,000 new businesses (out of a total population of 1.9 million firms) started trading in the 2006-7 financial year, and 286,000 enterprises ceased operating (Australian Bureau of Statistics 2007). This makes it difficult to develop and maintain reporting and education relationships within the sector.

Lack of specialist legal skills. The small size of most firms means they typically do not have in-house specialists in many functional areas, such as legal counsel. Their low level of turnover and net operating profit also means that they are disinclined to spend money on seeking such external advice. The net result is that managers and staff within most SMEs do not possess any internal knowledge about trade practices laws, and are unlikely to proactively seek out advice on compliance.

Self-employed individuals. The most common form of enterprise structure is the micro-firm which employs only the business owners themselves. In many respects, the activities of such self-employed persons is more closely aligned to that of a paid employee than a businessperson – indeed, many such micro-sized “firms” have been created by large corporations and government outsourcing blue-collar and white-collar job to freelance individuals. Is it appropriate to impose an equivalent compliance burden, onus of proof and adherence to trade practices laws as that required of larger entities?

Detecting breaches and non-compliance. It is much more difficult for a regulator to detect breaches of the law amongst the small business community. Whereas large corporations typically have a high public visibility and large number of customers, making transgressions easier to identify, a regulator cannot possibly hope to provide the same level of scrutiny across the whole SME community.

The importance of public perception and co-operation. Given the large number of SMEs and limited enforcement capacity amongst regulators, many agencies must needs be place a heavy reliance on public complaints and reporting, rather than on their own internally-initiated inspection and compliance auditing, to detect breaches. And since many SMEs do not access formal business networks, regulators often need to use public media to convey the image to business operators that they are “on the job” (Gunningham 2002).

Small firm-to-small firm conflict. Not all inter-firm stoushes in the competition arena occur between large and small enterprises. It is an over-simplification to always assume that large firms will seek to prey on smaller ones. In many cases, in fact, breaches of antitrust or trade practices law can occur *between* competing small firms (Foer 2001).

Heterogeneity of the sector. The SME sector cannot be treated as a discrete and uniform community. There are wide internal variations in firm size, they are

geographically dispersed over many communities and region, and they are to be found in many (indeed, all) different industry sectors.

Role of industry associations. Many competition authorities rely upon business organisations (such as professional bodies, Chambers of Commerce and industry representative groups) as the major conduit for information dissemination to the private business sector. Given the high rates of churn and difficulty in conducting outreach discussed above, this is a logical step. However, it may not be an entirely effective strategy, since in many industries (especially those outside the professions), the level of membership of business associations can be quite low.

Self-regulation. Competition agencies in many jurisdictions rely on firms to self-diagnose their compliance with the existing body of competition and trade practice laws. Firms are sometimes required to make their own assessment as to whether or not they are in breach of a statute, yet as studies of self-regulation amongst SMEs have shown, most small firms are poorly equipped to perform this task. Indeed, many actually prefer a highly prescriptive approach that gives them greater certainty than a flexible self-assessment regime (Fairman & Yap 2005).

Reputational capital. Large corporations can sometimes be driven to improved levels of trade practices compliance by the scrutiny and pressure of shareholders, consumers, the media and other external stakeholders. However, small firms typically confront less public scrutiny, and compliance is less likely to be driven by the need to protect the firm's public image (Neilsen & Parker 2008).

Proportionality of response. The level of penalties imposed on small firms can be problematic for bodies responsible for enforcing antitrust and trade practices laws. Should all firms be subject to equal penalties for the same offence, or should there be a level of proportionality? Should penalties imposed take into account the highly marginal nature of many SMEs, and the high likelihood that they have had little (if any) access to prior legal advice?

5. Future Research

The other critical component in competition regulation in the small business sector is a lack of research-based evidence. Analysis into the relationship between small firms and the many various aspects of competition policy and regulation is, at best, limited and scattered. Whilst a number of writers as far back as the 1950s and 1960s (such as Chaffetz 1953) were already arguing that small business constituted a special case in the administration of antitrust laws, the SME phenomena has not been well explored to date. As the US Small Business Administration has noted, even though a "...significant body of literature exists on the economic importance of antitrust laws and enforcement for firms...less is known about [their] impact on small businesses..." (US SBA 2008, p.i). There are numerous areas in which greater understanding is required. Some of these include the following:

Levels of knowledge about competition law. What understanding do small firm owners and other decision-makers have about trade practices and competition law? Is it higher or lower than that of the general public? Can we predict particular types of firms that are more likely to be compliant than others, or vice versa?

The impact of competition policy changes on small business. When new competition dynamics are introduced into a specific industry sector (such as a new policy initiative by government), how does this affect the SME population? Are particular types of small business more likely to survive, thrive or fail than other firms?

Barriers and triggers to utilisation of legal remedies by small firms. Most competition regimes allow affected parties to initiate their own actions, but the extent to which these are used by SMEs is poorly understood. Are new and small enterprises less likely to use legal redress than a large firm when a competitor breaches antitrust or trade practices law? What factors encourage them to do so, or prevent them from doing so?

Co-operation, collusion and cartel behaviour. Do small business owners understand the difference between these different types of behaviour? To what extent do they already engage in such activities?

The influence of third parties. SME owner-managers typically often heavily rely on information-sharing and other influences from their business peers and personal networks. What external factors cause them to improve (or not improve) their compliance activities?

The impact of divestitures and antitrust enforcement on small firm market entry. When a regulator forces a divestiture, corporate breakup or other enforcement action into a highly-concentrated industry, theory suggests that this will provide a “breathing space” into which small firms can now move. However, limited case study analysis by the US Small Business Administration (2008) has indicated that this does not always occur: frequently small firms cannot regain a foothold in the market. Is this true in most circumstances?

The burden and impact of increased compliance. Regulatory changes in the competition arena can sometimes lead to greater reporting requirements for firms in a particular industry sector. Are small firms able to meet such additional reporting requirements? Does the additional compliance burden have a disproportionate impact on them?

How research is conducted in order to answer these and other questions is also important. The existing body of literature in this field is not only small; it is frequently case-based, and there is a noticeable lack of large scale quantitative studies in the field. And as Curran & Blackburn (2001) have pointed out, small business research has its particular methodological issues that researchers need to be aware of.

This call to undertake greater research is not just an exercise in navel-gazing. Developing a sound research base into all of these issues, plus others, is important for many of the parties involved in competition regulation. A wide-based body of robust data can help provide legislators, policy-makers, and regulators with a better understanding of what issues need to be addressed, rather than simply making *a priori* assumptions. It can also be subsequently used to evaluate the impact of particular changes and reforms over time (for example, by the use of longitudinal studies on particular issues). Finally, it may also be of value to industry associations and

representative groups, many of whom have been accused of lobbying for competition law and policy changes without having a solid base of impartial research-based evidence to support their claims.

6. Conclusion

Small enterprises are an essential component of every economy, and a significant factor in the competition regimes adopted in each jurisdiction. As this paper has attempted to make clear, small business does not deal with competition in the same way as the large modern corporation.

Trying to work with, and be sensitive to, the needs of the small business sector is not always easy. It is a complex, poorly understood community of firms, and can create significant challenges for any regulatory or policymaking body. There is no “magic bullet” solution to this problem; instead, it requires a concerted, ongoing strategy to address. Doing so is not always easy. It can consume a substantial investment of effort and understanding – but the cost of not dealing with this part of the business community is even greater.

References

- Audretsch, D.B.; van Leeuwen, G.; Menkveld, B. & Thurik, R. (2001) "Market Dynamics in the Netherlands: Competition Policy and The Role of Small Firms" *International Journal of Industrial Organization* Vol. 19 No. 5 (April), pp.795-821.
- Australian Bureau of Statistics (2007), *Counts of Australian Businesses, Including Entries And Exits*, Cat.no.8165.0, Canberra: Australian Bureau of Statistics.
- Carter, S. (1996) "Small Business Marketing" in Warner, M. (ed.) *International Encyclopedia of Business and Management* London: Routledge, pp.140-156.
- Chaffetz, H.E. (1953) "The Antitrust Laws and Small Business" *Antitrust Law Journal* No.2, pp.77 ff.
- Curran, J. & Blackburn, R.A. (2001) *Researching the Small Enterprise* London: Sage.
- Fairman, R. & Yap, C. (2005) "Enforced Self-Regulation, Prescription, and Conceptions of Compliance Within Small Businesses: The Impact of Enforcement" *Law and Policy* Vol.27 No.4 (October), pp.491-519.
- Foer, A.A. (2001) "Small Business and Antitrust" *Small Business Economics* Vol.16 No.1 (February), pp.3-20.
- Gibb, A.A. (2000) "SME Policy, Academic Research and the Growth of Ignorance, Mythical Concepts, Myths, Assumptions, Rituals and Confusions" *International Small Business Journal* Vol.18 No.3 (May), pp.13-35.
- Golodner, A.M. (2001) "Antitrust, Innovation, Entrepreneurship and Small Business" *Small Business Economics* Vol.16 No.1 (February), pp.31-35.
- Gunningham, N. (2002) "Regulating Small and Medium Sized Enterprises" *Journal of Environmental Law* Vol.14 No.1 (March), pp.3-32.
- Ministry of Economic Development, New Zealand (2007) *SMEs in New Zealand: Structure and Dynamics* Wellington: Ministry of Economic Development.
- Neilsen, V. & Parker, C. (2008) "To What Extent do third Parties Influence Business Compliance?" *Journal of Law and Society* Vol.35 No.3, pp.309-340.
- Neumann, M. (2001) *Competition Policy: History, Theory and Practice* Cheltenham: Edward Elgar.
- Organisation for Economic Co-operation and Development (OECD) (2008) *Measuring Entrepreneurship: A Digest of Indicators* Paris: OECD Statistics Directorate.

Schaper, M. (2006) “Distribution Patterns of Small Firms in Developed Economies: Is There An Emergent Global Pattern?” *International Journal of Entrepreneurship and Small Business* Vol.3 No.2, pp.183-189.

Schaper, M.; Dana, L.P.; Anderson, R.B. & Moroz, P. (2009) “Distribution Of Firms By Size: Observations and Evidence From Selected Countries” *International Journal of Entrepreneurship and Innovation Management* (in press)

Schaper, M. & Volery, T. (2007) *Entrepreneurship and Small Business: 2nd Pacific Rim Edition* Brisbane: John Wiley & Sons.

United Kingdom Department of Trade and Industry (2003) *Statistical Press Release: Small and Medium-Sized Enterprise Statistics for the UK 2002*, 28 August, Sheffield: Department of Trade and Industry.

US Census Bureau (2008) *Statistics About Business Size (Including Small Business)* [Online] www.census.gov/epcd/www/smallbus.html (accessed 09 January 2009).

US Small Business Administration – Office of Advocacy (2008) “Analyzing the Impacts of Antitrust Laws and Enforcement on Small Business” July. Report prepared for the SBA; contract no. SBAHQ-06-M-0476.

Table One: Some Typical Differences Between Small and Large Firms

	<i>SMEs</i>	<i>Large Firms</i>
<i>Planning timeframe</i>	Short-term timeframe; intuitive	Long-term; formalised
<i>Number of owners</i>	1-2	Multiple shareholders
<i>Organisational structure</i>	Adhocracy	Bureaucracy
<i>Management</i>	By owner	By professional executives
<i>Number of business establishments</i>	Single	Multiple
<i>Product/service rRange</i>	Limited	Limited or wide
<i>Knowledge base</i>	Limited; ad-hoc	Sophisticated; extensive; widely dispersed
<i>Internal communication systems</i>	Informal; personalised	Systematic; structured
<i>Management skills</i>	Wide range; little formal training	Specialist; technical skills focus
<i>Personal income of managers</i>	Contingent on firm performance; highly variable	Usually fixed
<i>Personal interests</i>	Directly affect firm performance	Minimal role
<i>Quality control</i>	Informal; personal benchmarks	Standardised
<i>Firm objectives</i>	Personalised	Set by corporation and shareholders

Sources: Carter (1996) and Gibb (2000)

Table Two: Counts Of Firms By Size In Selected Nations And Geographic Regions

	Australia, 2007	Europe-19 2003	New Zealand, 2006	UK 2002	USA 2004
Micro-businesses	1,699,277 (84.5%)	17,820,000 (92.28%)		2,600,000 (68.42%)	23,000,000 (90.87%)
Small business	228,313 (11.3%)	1,260,000 (6.53%)	299,774 (87.5%)	1,170,000 (30.79%)	1,670,000 (6.6%)
Medium enterprises	78,304 (3.9%)	180,000 (0.93%)	31,901 (9.3%)	27,000 (0.71%)	520,000 (2.05%)
Large firms	5,876 (0.3%)	40,000 (0.21%)	11,115 (3.2%)	7,000 (0.18%)	120,000 (0.47%)
Total	2,011,770 (100%)	19,310,000 (100%)	342,790 (100%)	3,804,000 (100%)	25,310,000 (100%)

Sources: Schaper(2006); Australian Bureau of Statistics (2007); United Kingdom Department of Trade and Industry (2003); US Census Bureau (2008); New Zealand Ministry of Economic Development (2007). Figures may not add up due to rounding. For New Zealand, “small business” category includes micro-firms.

Table Three: Count of Private Sector Firms in Australia, 1983-2007

	2007	2002	1998-99	1995-96	1983-84
Micro-businesses (0-4 employees; includes self-employed persons)	1,699,277 (84.5%)	952,200 (81.80%)	791,400 (79.9%)	748,400 (80.16%)	455,400 (78.67%)
Small business (5-19 employees)	228,313 (11.3%)	169,800 (14.59%)	159,800 (16.14%)	147,900 (15.84%)	99,200 (17.13%)
Medium enterprises (20-199 employees)	78,304 (3.9%)	39,300 (3.38%)	36,100 (3.65%)	34,600 (3.7%)	22,500 (3.9%)
Large firms (200 or more employees)	5,876 (0.3%)	2,800 (0.24%)	2,700 (0.27%)	2,700 (0.29%)	1,800 (0.31%)
Total	2,011,770 (100%)	1,164,100 (100%)	990,000 (100%)	933,600 (100%)	578,900 (100%)

Sources: Australian Bureau of Statistics (2007, p.6) and as cited in Schaper (2006).

Workshop: Entrepreneurship research using Web 2.0- ECSB-ICSB experience into the foray

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‘Entrepreneurship Research using Web 2.0 Tools’ is a workshop that will focus on the implementation of web 2.0 tools and how they may be used to improve and support research in entrepreneurship and build an effective online research community. Speakers will discuss their first hand experiences in using various web 2.0 tools such as the wiki, online research database, webinars, blogs and social media, to more effectively manage and transfer knowledge. The overall aim of the workshop is to identify a growing trend in entrepreneurship research of collaborative intelligence and highlight ways in which researchers can utilize some of these new technologies with efficiency. The panel will tie in results from the Dell Global Small Business Excellence Award, which rewards small businesses and entrepreneurs for their innovative use of IT to grow their business. Real-life case studies and results will be presented and discussed in order to provide a tangible example.

Track: 5. Technology and Knowledge Intensive Entrepreneurship

Small and Medium Sized Enterprises and their Globalization Strategy

Christopher Stehr

Entrepreneurial globalization and a globalization strategy of a Small and Medium Sized Enterprise (SME) is more than just export. Some SMEs reach their limits in this process of an entrepreneurial globalization which needs activities steps beyond the previous internationalization of businesses.

The aim of the paper is to show on different examples how it is possible to develop from a former regional market leader to an actual world market leader. 30 world market leaders from different branches of the southern part of Germany have been chosen for this best practice oriented survey. The methodology and scientific content evolved are based on structured interviews as well as on the descriptive method.

The main aspect of the paper is - on the basis of a theoretical approach adapted from practical examples - how SMEs can tap their full entrepreneurial globalization potential.

Keywords: Globalization; small business; globalization strategy; entrepreneurial globalization potential; strategy implementation.

Introduction

Globalization as scientific term is undifferentiated used and in the same time a context-linked catchword (Löffler, 2000). Because of a continuous liberalization of worldwide trade - even within the slow down of the negotiations of the Doha Development Round and the actual global financial crises - the global competition will increase. That means that also SMEs with regional or national orientation have to face an increasing number of potential foreign competitors in their home markets.

The continuous processes of economical globalization comprise several chances for small and medium sized enterprises (SME) but also some risks. Chances exist in the abilities to export and the continuous market entries in to new markets and the final globalization of business. The economic ability of

taking strategic or operational advantage for a company out of the arising chances offered by globalization becomes more important for the present and future success. Especially the entrepreneurial globalization strategy that is developed, adopted and adjusted specifically for the companies' needs is essential.

The paper shows how companies can develop and implement a globalization strategy for their entrepreneurial globalization. Following this, the current globalization strategies of enterprises will be introduced and pointed out by examples of successful globalized SMEs and some big German companies. For this purpose structured interviews with 30 SMEs of the southern part of Germany, which are already market or world market leaders, were done. The empirical findings of the survey are used to develop the theoretical background.

Entrepreneurial Globalization/Entrepreneurial Globalization Strategy

The globalization of business activities is not a new development in the framework of economic acting. Therefore entrepreneurial globalization found its reference in the economic literature (Kumar & Hausmann, 1992). There are differences between the definition and the dimensions mentioned beneath globalization and globalization strategy (Welge & Holtbrügge, 2001).

First of all, it is necessary to differentiate between entrepreneurial internationalization and entrepreneurial globalization.

Entrepreneurial internationalization or the internationalization of businesses is already reached if the enterprise supplies markets in two or more countries. So it is possible to speak of internationalization when a company becomes active on a foreign market for the first time (Peng, 2009). With that, even for example exports to Austria and to Switzerland by German firms or exports to Mexico and to Canada by US-American are included in this definition of internationalization.

Even more, the entrepreneurial globalization is the economical process of enlargement the existing international activities to a global extend (Bamberger & Wrona, 2002). Thus, globalization is the "generic term for all forms of international economical activities" (Krystek & Zur, 2002, p. 6).

Concerning the term globalization strategy – similar to the term globalization - there is no general definition and a wide range of dimensions. Out of management perspective globalization strategy is to understand as the strategic development and the following operational planning and the successful implementation of the global entrepreneurial economical activities (Becker, 2001).

Analysis of the Entrepreneurial Globalization Potential

German SMEs – for example - are facing more and more global competition in their international captured markets and in their national or regional markets. SMEs have to face new competitors and at the same time they have to develop strategies for abroad respectively to focus on the enlargement of their foreign activities going further than the classical export activities.

For SMEs and its processes of entrepreneurial globalization it seems necessary to check as well the classical (procurement, production and sales) as the enlarged economical areas (human resources, finance and so on) for non-utilised globalization potential. With a positive benchmark of their potential SMEs develop and implement comprehensive globalization strategies to accomplish these challenges. For being successful in globalization a strategy is needed which is adjusted on the current company (adaptation). Based on this and according to the framework of an operationalized globalization strategy there should be a continuous inspection with latent top-down/bottom-up planning process taking place.

Thus, for SMEs having only very limited international activities so far the basic analysis of their own globalization potential is the first and at the same time one of the most important steps for entrepreneurial globalization. Not only for global non-active SMEs is the development and implementation of a globalization strategy of importance (Ghemawat, 2007). A refreshing analysis of the own actual or passed strategy is also helpful for internationalized SMEs, as a basis for further activities in the process of entrepreneurial globalization.

Of particular importance are already executed international economic activities and the experiences the SME can derive from these. If the SME has already problems with its current degree of internationalization, the possibility

of failure of the adjustment or enlargement to the point of global activities increases as a result of non-solved problems.

It is useful for an entrepreneur to check critically the companies' international activities before the "going global" in order to analyse the possible strengths and to eliminate the weaknesses. Besides the structural analysis that follows the five-forces model also the SWOT-analysis as a strategic instrument to check the globalization potential can be used. Thereby, in the framework of the internal inspection the strengths and weaknesses - and in the external view - the opportunities and threats get analysed and valued (Porter, 1989).

A wrong decision respectively the overestimation of the company's internal resources and qualifications in the course of globalization can lead to a misinvestment (Tilly & Welfens, 2000). The company will be financially burdened in this case. This can lead to - for example with the decision in the framework of the so-called "off-shoring" - back sourcing of the added value process into the particular descending country with loss of the investment. In the worst case the global competitor will also be strengthened by a withdrawal from the foreign market. Continuously, current examples are found in the economical press (for example the withdrawal of a German do-it-yourself store from China and the sale to the market leader). The analysis of the globalization potential of the particular SME results from the inspection of the following central analysis:

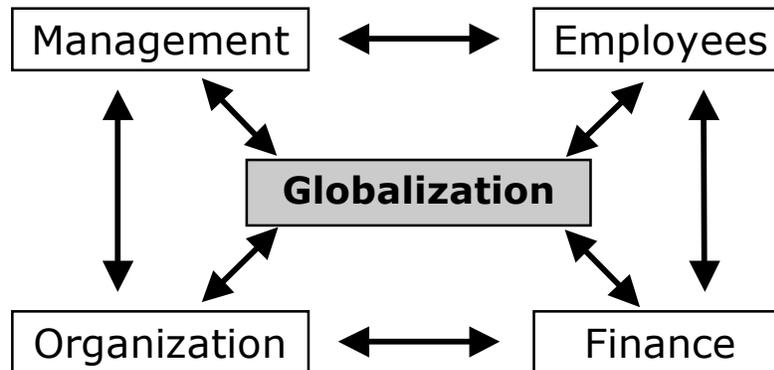
- The globalization potential develops generally out of the SMEs willingness to adjust and to adapt to the global conditions (law, culture, administration) and worldwide (political/economical) situations. The central challenge thereby is the motivation and support of the associates and employees for the "going global". The willingness to adjust needs a gradual development and has to be worked out systematically within the SME especially at the beginning of the process of entrepreneurial globalization (for example, the transparent internal communication concerning the planned foreign and the new global activities in the framework of an associate gathering).
- There is a direct relation between the possibility of entrepreneurial globalization and the organizational structure and the human resources of the SME. To that belong as well the general organizational and structural capacities of the SME as the necessary increased qualification of the employees (for example: administrators for export/import, language

courses, intercultural training, global mindset and globalization competencies etc.) and especially the willingness of the management to take additional costs for further internal and external investments (for additional foreign subsidiaries: shortage of the resource “time” as a result of, for example, the executive’s absence for several weeks).

- The question of financing the planned foreign and global investments is also a central criterion for the decision whether there is a positive or negative potential of globalization of a SME. An increased leverage in the framework of a changed quantitative and qualitative orientated credit rating for the SME (Basel II) complicates the financing of globalization activities even more. In general, several federal states and state-owned banks offer loans for external financing of the globalization efforts. Depending of the form of the company, in the framework of self financing the stock of the company can be increased by a new distribution of shares or by deposits of the partners.
- So, the competence and ability for entrepreneurial globalization refers to the particular resources, the aims of the company, the business segment and the position of the SME in the competition (using for example the five-forces model, SWOT analysis and the portfolio analysis).

Figure 1

Relevant sections for entrepreneurial globalization (Own figure)



To summarize it, within the survey four central internal sections were discovered in which the entrepreneur has to develop detailed clearness about: 1) general management capacities 2) number and qualification of the employees 3) organizational structure and 4) finance (see fig. 1). This theoretical analysis fits with the results of the empirical survey. Four fields were mentioned by most of the interview partners as important for the development of a globalization strategy as basis for their successful entrepreneurial globalization. In all of the four sections the central question of preparation of the development of a globalization strategy of the SME has to be answered: “Are we as a company really ready for a “going global”?”

Development of Globalization Strategies

Enterprise specific life circle

The next step after a positive decision for a “going global” is the strategic development and the operational implementation. While big enterprises for example from the German automotive industry already dispose of a tradition of globalization and with that of adequate resources for the corporate global evolution (Grube, 2003) to reach a global level SMEs are missing consistent globalization strategies. Already at the beginning of global activities and in particular during the development of an explicit globalization strategy there

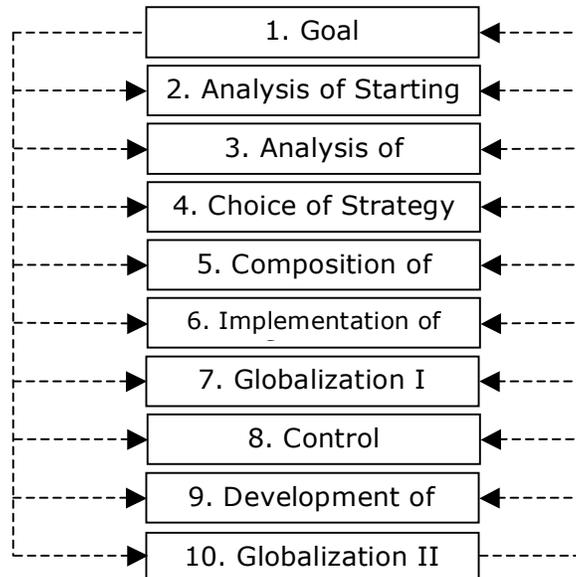
are deficits in SMEs (EU, 2004). This keeps independent from the level of strategy, may it be the corporate strategy or the following strategies for business areas and functional areas. Apart from the difficulties like for example the correct estimation of the market volume and the market potential the choice of partners abroad or the lack of globalization know-how (knowledge about the country, laws, language, culture, etc.) are special management challenges which can cause difficulties for SMEs in the process of entrepreneurial globalization (Göker, 2000). Thus, the focus of the management is more on marketing activities respectively questions of technology (quality, technological transfers) than on strategic adjustment. The entrepreneur's personality plays an important role during the globalization of the enterprise (Nahrendorf, 2008).

The research shows that 27 of the 30 interviewed companies would not exist anymore if they wouldn't have had an explicit or implicit strategy for their entrepreneurial globalization. The vision of the founders was therefore an important issue. The vision includes in the main cases a global view which reduces the notional entry-barriers.

For the analysis of the above mentioned deficit of strategic adjustment for example an ideal type of action-phase model with counter current processes can be used, which has to be adapted to the specific SME and the company specific situation of the founders and managers (see fig. 2).

Figure 2

Ideal type of way of a globalization strategy (Own figure)



In the beginning of each and every corporate activity (1) stands the vision of the founder(s) and the current manager. An analysis (2) of the corporate starting point and the resulting aspects is accompanied by an environmental analysis (3), leading with the next steps to the strategy and the choice of strategy (4). The following process of working out a globalization strategy has to be integrated into the already existing corporate strategy.

After that, related to the expansion of the business a general strategy (5) (for example timing strategy) gets verbalized and worked out in detail (for example strategy for market cultivation respectively market entry). The next step is the implementation of the strategy (6), which is reflected in the embodiment of internal organization (e.g. the designation of a responsible for the globalization), implementation of the strategies and the action programs. This leads finally to the desired entrepreneurial globalization according to the developed definition (7).

The next step is the permanent control (8) (variance analysis) of the executed global activities. By means of that, frictional losses can be discovered and optimization potentials of and so called synergy potentials can be made

available. The new insights lead to a handling (9) of the given and with that to a revised and enlarged globalization strategy. This strategy can lead, under certain circumstances, to a withdrawal from already edited markets or to a completely new adjustment. Finally, however SMEs can reach the entrepreneurial globalization (10).

An entrepreneurial globalization of a SME is obligatory. Not taking part would mean stagnation respectively a step back for the enterprise especially with respect to the increasing foreign competition on the traditional company specific market. In this context we can speak of the so called push- and pull-factors. While push-factors focus on the limits of the home market, the pull-factors focus on the customer who for example demands from the SME to follow him to different foreign markets (Bell, 2008). The SME has in this regard almost no other choice than to follow its main customer into the “new world” (that happened to several German SMEs especially in the automotive branch respectively the automotive supplying industry). The interviews show that in most cases the companies are going global, because of the requirements of their costumers. The pull-factor of an international or global demand seemed to be one of the most important factors for an entrepreneurial globalization (Yeung, 2005).

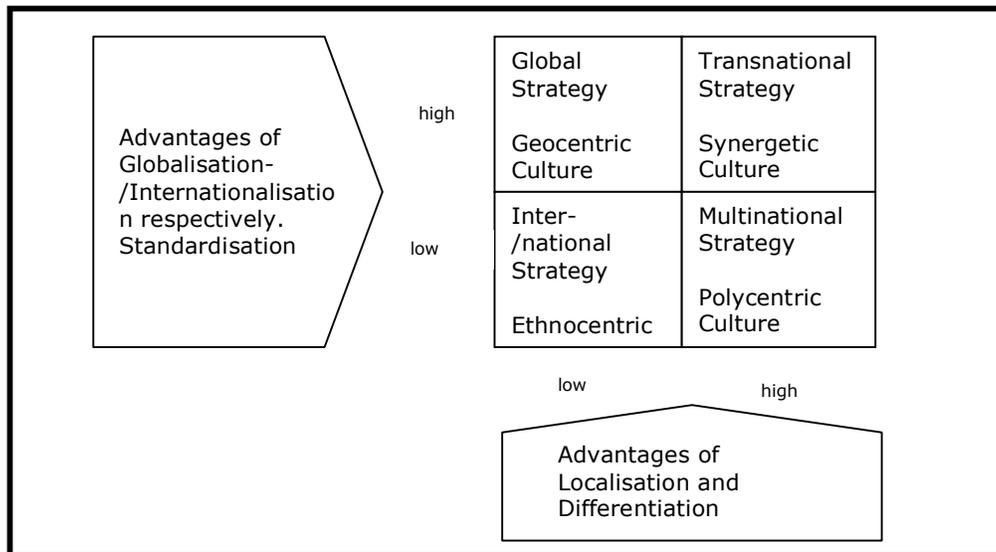
Business sections in the framework of a globalization strategy

For the adaptation and specific deepening in the framework of globalization of enterprises and the enterprise specific products there are yet even more strategic instruments (Porter, 1989) depending on the size of advantages of the globalization and on how far local adjustments are necessary. Four ideal types of globalization strategies can be specified (fig. 3). With the help of portfolios the adjustment of a globalization strategy can be summarized. This includes advantages or a global product strategy starting from a global (a) over a trans- (b) and an international (c) to a multinational (d) strategy. At the same time the portfolio provides an overview of standardization respectively differentiation advantages in the framework of the chosen globalization strategy.

Figure 3

Advantages and disadvantages of globalization strategies

(Figure following Löffler, 2000)



In the framework of the **global strategy** several small and country specific adjustments have to be taken (Ghemawat, 2007). The market is considered to be standardised and mostly homogeneous. With - in this case - products that are standardised worldwide (global brand) advantages of costs and prices for big sales volumes can be achieved (Backhaus & Büschken & Voeth, 2003). In connection with the global strategy entrepreneurial decisions become centralised (Schneider, 2004). The management has to establish in this respect an integrating overview and to observe the sum of the success in all the countries/markets as one (geocentric culture). The result is that the single maximization of the success of each and every country/market has to be achieved (acceptance of sub optimization for certain parts in favour of the common optimum).

Within the **transnational strategy** standardization advantages (economies of scale/economies of scope) are used as well as national differences. In this way, advantages of economies of scale through standardization of processes

and advantages of networks for example with the simultaneous usage of brand names can be generated. Regional centres of added value have to be linked in the framework of this transnational strategy and have to be adjusted in a way that denotes a synergetic culture. With the realization of arbitrage effects (different costs for factors or productivity in the different countries) this strategy can be used as well for national differences (Ghemawat, 2007).

Concerning the **international strategy** little advantages are gained by global standardization and local differentiation. The advantages could be acquired deeply and used by revising of the strategy. The binding to the home market is still very distinct. A few countries are handled via export. Chances on foreign markets get used partially with the appearance of occasional opportunities (for example the order of a client from abroad). Preferred are countries which have similarities to the home market. The international strategy is linked in literature with the ethnocentric culture. The potentially existing foreign plants are marked by the visions and decisions of the holding company.

In the framework of the **multinational strategy** the enterprise adapts itself to the specialities of the current foreign market. The products are aligned specifically to the countries as well. The organizational structures are strongly adjusted to the specific countries and every strategy is being specified and adapted to each country. Cultural differences within single subsidiaries are accepted and as a result of that decisions are made decentred (polycentric culture). That means for the executive that a build-up of a complete organization for a country is linked to a relatively high autonomy of the subsidiaries and, coming with this, only little meaning of the headquarters in comparison to a global strategy. That tends to result as higher entry barriers for other following suppliers (Welge & Holtbrügge, 2001).

For the management, not only in the headquarters but on site as well, this results in an amount of sensitivity and flexibility regarding market developments by using slots for local suppliers. Especially the deliberate usage of limited action enables SMEs to develop lucrative slots. It is an ideal starting point for SMEs on the way into globalization and leads normally from a local to a multinational and even to global business. The starting point is a definition of a market strategy in the framework of enlarged internationalization strategy. A next step can be the development of regional

concepts (transnational strategy) to a possible global strategy, finally (Kutschker & Schmid, 2005).

The here mentioned globalization strategies point out how single SMEs could act ideal typically in the environment of the already global competition. In practice mixed strategies are used primarily. Non of the four mentioned ideal typical strategies is followed exclusively. Intersections result from an adaptation to the particular reality of the company.

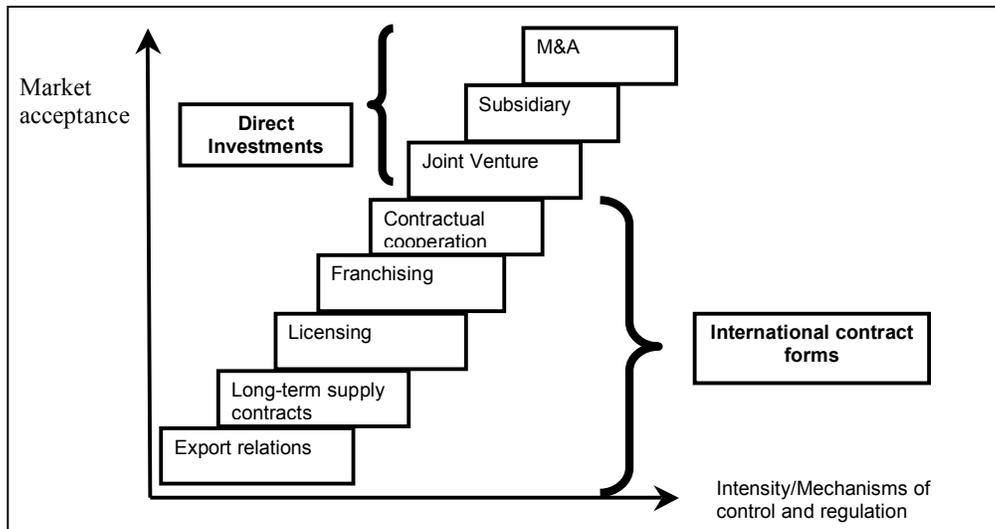
Ability of globalization of a product

A further central step on the way into globalization is the examination of the product with respect to its ability of worldwide distribution or sale. For the examination of the ability of globalization an appropriate classification of the markets in which the product should be launched are useful. The more precise the classification is the more precise the factors of influence will be visible - like for example governmental regulation, sociocultural and local peculiarities such as taboos. An alignment onto the target group brings competitive advantages during the upcoming globalization. As a conceptual method one of the three-dimensional approaches is suitable to classify the business areas and for the successful globalization of products:

- A first dimension for the classification of business areas are the challenges which are to be fulfilled in the different client sections (consumer functions).
- A further approach is formed by the client sections which map the heterogeneity of the demand. The criteria for that have to be chosen in such a way that the conclusions regarding to buying behaviour, buying criteria, marketing and sales efforts, own strengths and weaknesses can be drawn.
- As a third dimension for the classification of single deals, the method respectively technology of the underlying duty is suitable.

Examples of Globalization Strategies

Figure 4
Procedures and instruments of globalization
(Figure following Gutmann & Kabst, 2000)



Naturally, a general answer on the question of the “right” globalization strategy can not be given (Schmidt, 2004) but the following examples of different companies show successful ways and instruments (see fig. 4).

Globalization of export: a trading firm as a partner

A possibility for a faster globalization of SMEs in the framework of increasing export consists in the cooperation with a trading firm. Normally, the core competence of a trading firm is to notice chances for business independently of the industrial branch to find suitable technologies, products or partners and to build up new business models. Especially in Japan trading firms are historically wide spread and active until today. Not only trading firms have a big importance for the market entry in Japan as a very first step of globalization - but also on the way of further entrepreneurial globalization.

They support world wide networks; for example the Marubeni Corporation has activities in more than 70 countries, 110 offices and more than 200 companies which are used to follow and to examine the latest technological, political and economical developments (Kutschker & Schmidt, 2005). Especially for the market entry in Japan or Asia the partnership with a trading firm is a very effective option. SMEs without extensive contacts and measures benefit from the existing networks and strategies.

Global chain of economic value added through licensing

Another component is pointed out by the following example of one of the world's biggest producers of footballs. This enterprise doesn't only produce footballs in the Pakistani city of Sialkot the so called "world's capital of football" but also in the Thai industrial area of Sarirasha. There the Japanese license-taker of the German enterprise produced the footballs which were used for the World Cup 2006 in a global chain of economic value added. Even though only ten percent of the production capacity of the factory is used by this order the German standards concerning lean-management or even social and environmental standards could be implemented successfully and the high product quality standards could be fulfilled.

This example shows not only a way into the globalization on the basis of the licences strategy but underlines also the possibility of a connection of world wide desirable standards.

Global forms of partnership: franchise/joint venture

Out of the different forms of partnerships the most relevant and interesting ones in the framework of a globalization of SMEs are besides the already mentioned trading firm especially franchise and joint venture (Peng, 2009). In this context, of many factors which are important for a successful partnership the following ones are seen as causal for the success respectively failure:

- The ability of the partners to agree to common aims
- The philosophy of the partners and the partnership (common values)
- The coordination between the partners in the partnership

- Performance and potential of the partnership
- Franchise-/partnership contracts
- Mutual trust and mutual commitments
- Style of leadership/management in the partnership
- Meaning of the planning
- Handling of special necessities/problems
- Coordination of business processes

To build up a successful global partnership the following steps have to be kept in mind and be defined in the framework of the partnership:

- Expected economic value added in the foreign market
- Wanted amendments/mutual amplification of interests
- Organizational and financial resources of the partner
- Degree of the wanted control concerning own strategic resources
- Limits of tolerance for accepted risks with respect to time aspects
- Strategic meaning of the market at the partner's location

Only when for all these points a clear answer can be given a partnership respectively in the case of franchise partnerships is on the way into global presence reasonable and has good perspectives to be economically successful.

How difficult but nevertheless successful such a globalization strategy can be is shown by an example on the market of luxury goods and in particular the jewellery branch. A SME from southern Germany made it with the above mentioned criteria in the framework of a franchise-based concept within ten years to become a "hidden champion" (Simon, 1996) and with that to the world market leader. The current expansion rates are lying in the high double digit section. The basis for this enormous success is the (inevitable) diligence selecting their franchise-partners. The management of the SME sees "common ideals" as the crucial criterion for a well-working franchise-partnership. Besides, the global chain of economic value added - the so called glocalised sales strategy - the "individualised mass production" and the high world wide product acceptance are playing an important role.

Globalization of brands

Another promising approach to take the leading position in global markets is a sophisticated market and product policy (Subhash, 2003). The so-called

global-branding-approach contains a product development on the level between local differentiation and global standardization.

Again, an example can be given by a world market leader from southern Germany:

The SME became the undisputed market leader for systems technology (electricity supply) within the last ten years. Product and brand are not seen as one but conceptually as parts consisting of a functional product part and a market part. The followed strategy focuses on the grown brand which is being held “à jour” by continuous innovation, new production techniques and newly developed products. Local needs are not overlaid by the global brand of the SME but acquired and satisfied locally.

In the meantime, additional non-calculable synergy effects have evolved regarding this globalization strategy. Newly developed products having arisen from regional client needs have been adjusted to other markets and have become bestsellers on these regional markets improving at the same time the position of the enterprise on the world market. In this case, the current growth rates are in the high double-digit almost triple-digit area as well. The ten offices in the world are spread strategically over the continents in such a way that one can speak of global market penetration. As an “add-on”, and for a continuous usage of these effects regular company meetings are usually taking place on the particular sites spread all over the world. Apart from the “global-branding” the enterprise is also an exemplar for the “glocalization of factors of success” (Perlitz, 2004).

Globalization of factors of success

A further strategy as the result of a combination of theoretical thoughts and a successful application in praxis is the alignment to the three following factors of success:

- Regular collaboration with the clients to evolve the own products
- Coevally world wide and locally organized customer service with clear concept standard for the respective regional companies (so-called glocalization)
- Build-up of the own enterprise by organized growth and reorientation of the enterprise with every new key innovation

In practice, a German software house has accomplished these factors successfully and labels them as 1. trusted innovator, 2. globalization and 3. Best-run-organization.

More than half of the interviewed firms were able to assign their national factors of success on the international and global level. These factors were in most cases the ability for innovation, a focus on the customers needs coupled with market-monitoring, a flexible reaction on new external developments and the usage of the local innovation for their globalization and vice versa.

Global customer oriented product solution

The especially given flexibility for SMEs to react rapidly and goal-oriented to demands of the customers respectively to problems, can be defined as a strategy for customer oriented solutions (Silvius, 2004).

Like this for example, a German middle-sized company that produces machines as well as system solutions for production and testing steps for the manufacturing of micro-electric components recognized that the actual market in principle is partially divided world wide.

According to the belief of the management a bigger share of the market can only be reached by a better product solution in comparison to their competitors. This aim should be reached by quality, innovation and productivity.

The management formulates constructive to these vision five global goals for the company:

- World wide satisfaction of the clients
- Enlargement of the world wide market presence
- Continuous product improvement
- Constant improvement of the system
- Optimal cost/performance ratio

The alignment to these world wide goals led to an annual increase in turnover in the dimension of 15% to 30%. This outstanding growth was realized in particular with deeper and constant worldwide customer proximity.

Global values of enterprises

Another globalization strategy is based on theoretical approaches to innovation and continuity. A successful German engineering company, which was interviewed for this research, defines innovation as salable idea which can be implemented very fast. Referring to globalization, the proximity to customers is a necessary condition for the trust into the own brand and to signalize continuance to the customer. Continuance as a willingness for continuous change contains in this enterprise also to be always the ideal and to convey values. For this company that has developed out of a big middle-sized company the existence of these three factors (trust into the brand, signaling continuance to the customer and the willingness to continuous change) lead to world wide success (Leibinger, 2005).

Enterprise Specific Implementation

The market entry and the following continuous globalization can be systematized with an increasing degree of foreign business, for example into different levels like export, franchising, licensing, direct investments (see fig. 4). For the company's further and deeper entrepreneurial globalization additional aspects have to be recognized (Hentze & Kammel, 2000):

- Acquisition-oriented reasons: Development and preservation of resources
- Product-oriented reasons: Basically advantages of rationalization and costs
- Sales-oriented reasons: Development and preservation of foreign markets including situation specific competition strategies
- Environmentally oriented reasons: Usage of country specific frameworks in a cultural,

technological, legal or
economical way

- Factor specific reasons: Development of new resources in the sections of research, development and staff

Generally, it should be stated that the examples and instruments mentioned here as a basis for globalization of SME have to be adjusted carefully with respect to the company's specific situation. As decision guideline table in the sense of benefit analysis (see fig. 5) can be helpful.

Depending on the SME, company specific descriptions and attributes of quality with already done globalization-analysis' (see figs. 1 to 4) can be set into relation with the SMEs specific areas of function. The relevance for the globalization reflects thereby the subjective rating of the particular management.

The entrepreneur decides by himself via weighting (all functional areas = 100%) about the meaning and expected effort (for example: high=6, middle=3, low=1) of the particular central factors in the framework of its globalization (management, organization, costs). In the end from the multiplication of the weighting and estimation of the effort it becomes the numerical sum of the values. Derived from that an executed descriptive company specific self-estimation and ensuring the steps to operationalized in the framework of further globalization of the particular SME (see fig. 5).

Figure 5

Table of examples- decision guidance for activities of globalization

Relevance/Effort for the Globalization	Weighting	Management	Organization	Associates	Costs	Company specific Estimation
Functional- areas						

Research & Development						
Human Ressources						
Acquisition						
Production						
Sales						
Logistic						

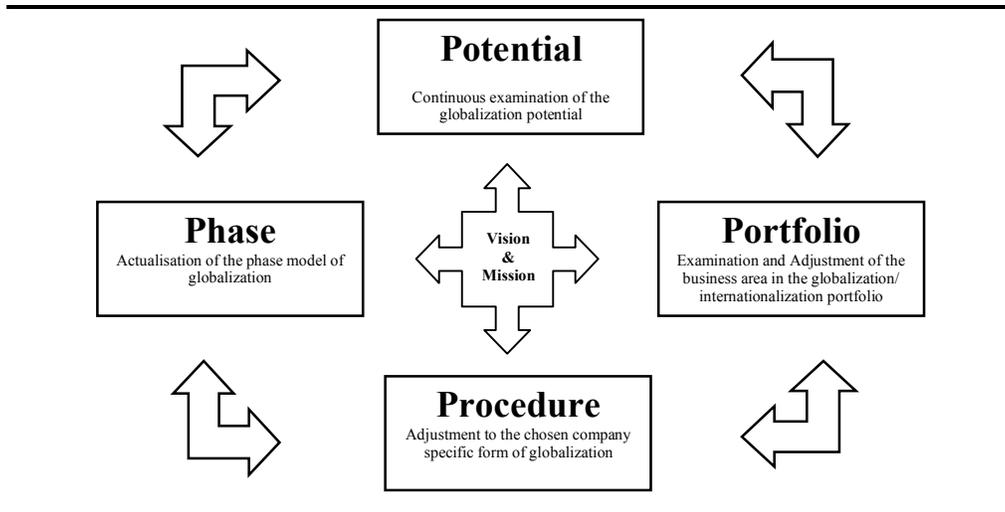
Conclusion

The process of economic globalization has to be seen as a fact. In the beginning of this article the thesis of the necessary optimization of global entrepreneurial activities of SME was postulated.

For SMEs it is necessary to work out an adequate globalization strategy. Also if in the beginning the SME doesn't seem to be affected by the process of globalization. In the framework of globalization strategies, different variations and instruments which are already implemented successfully by different companies have been shown in this article.

Figure 6

**The 4-P-modell: Process of combination and adjustment
via different instruments (Own figure)**



According to already existing experiences, the adoption of these strategies for SME with particular company specific adjustments is a passable way. Yet if these adjustments are not implemented especially in the areas of employees, organizational structure, finance, management, product quality, innovation and demands of the market the entrepreneurial globalization of the SME will fail. It should be the goal to see entrepreneurial globalization as a chance to find the right position on the world market - even for SMEs. The shown strategies and instruments can give a first overview. A combination of these shown strategies increase the possibilities of success during the “going global”, while the beginning, respectively the choice of the starting point of the own globalization (see fig. 6) and the latent dynamical interdependent process have to be defined for each and every SME.

The analysis instruments described in this article have been integrated in the following figure. The different areas of entrepreneurial globalization Potential (see fig. 1), Phase (fig. 2), Portfolio (fig. 3) and Procedure (fig. 4).

They should have been worked out before the combination and necessary conditions for the shown processes of progress in the framework of entrepreneurial globalization.

For all four areas, the essential questions regarding to a future globalization strategy and the following globalization of the enterprise should be clarified:

- Which globalization potential do we really have regarding to financing, management, organization and associates?
- In which phase of globalization are we now?
- Using which business segment strategy in the framework of globalization portfolio do we want to become active?
- By means of which operational convertible and for us most suitable procedure (form/instrument) of globalization (licensing, franchising, joint venture, M&A, etc.) do we want to implement our globalization strategy?

For a constructive first estimation of efforts for the globalization of the SME in the particular areas as above mentioned decision guidance can be accomplished.

For a successful entrepreneurial globalization these four functional or factor oriented areas have to be seriously proved. If the gap between the expectation/visions and the entrepreneurial reality is too big, the process of entrepreneurial globalization might fail.

Further success indicators beyond the described ones to be figured out in the areas quality, production, staff and environment. The standards in these areas achieved in the home country are already an advantage on the way to a globally successful SME. They serve a regulated competition as well as the protection of consumers and producers (Beschoner, 2002). These aspects can be standardized world wide. Additional advantages of time, technique and product quality in combination with ecology and fair working conditions increase the sales and at the same time increase the reputation of the then globalized SME.

References

- Backhaus, K., Büschken, J. & Voeth, M. (2003). *Internationales Marketing*. Stuttgart: Schäffer-Poeschel.
- Bamberger, I. & Wrona T. (2002). „Ursachen und Verläufe von Internationalisierungsentscheidungen mittelständischer Unternehmen“, in *Handbuch Internationales Management*. Ed. K. Macharzina. Wiesbaden: Gabler, 273-313.
- Bea, F. X. & Haas, J (2001). *Strategisches Management*, Stuttgart: UTB.

- Bell, Jim (2008). Accelerated Export Development: The Role and Importance of clients, paper presented at ISBC International Small Business Congress 2008, 35th International Small Business Congress, An Entrepreneurial Odyssey – from local heroes to global champions, 4th – 6th November 2008, Belfast, Northern Ireland: Congress Handbook.
- Beschorner, D. (2002). „Globalisierung und ihre Folgen“, in *Globalisierung – Chancen und Risiken*. Ed. D. Beschorner & C. Stehr. Ulm: Universität Ulm, 95-116.
- European Commission. (2004).
- Ghemawat, P. (2007). *Redefining Global Strategy*. Boston: Harvard Business School Publishing Corporation.
- Göker, H. A. (2000). “SMEs and Technological Innovation Policies“, in *Innovation and Market Globalization*. Ed. C. Corsi & A. Akhunov Amsterdam: IOS Press.
- Gutmann, J. & Kabst, R. (2000). *Internationalisierung im Mittelstand*. Wiesbaden: Gabler.
- Grube, R. (2003). „Globalisierungsstrategie bei DaimlerChrysler“, in *Perspektiven der strategischen Unternehmensführung*. Ed. M. Ringlstetter, H. Henzler & M. Mirow. Wiesbaden: Gabler, 489-499.
- Hentze, J. & Kammel, A. (2000). „Erfolgs- und Misserfolgskriterien mittelständischer Unternehmen“, in Osteuropa“, in *Internationalisierung im Mittelstand*. Ed. J. Gutmann, R. Kabst. Wiesbaden: Gabler, 209-226.
- Horx, M. (1998). *Das Zukunftsmanifest*. Düsseldorf: Econ.
- Karagozoglu, N & Lindell, M. (1998). “Internationalisation of small and medium-sized technology-based firms”, in *Journal of small business management*, 36, 44-59.
- Kotler, P. (2003). *Grundlagen des Marketing*. München: Pearson.
- Kumar, B. N. & Haussmann, H. (Eds.). (1992). *Handbuch der internationalen Unternehmenstätigkeit*. München: Beck.
- Krystek, U. & Zur E. (Eds.). (2002). *Handbuch Internationalisierung*. New York: Springer.

- Kutschker, M. & Schmid, S. (2005). *Internationales Management*. München: Oldenbourg.
- Löffler, J. (2000). *Entwicklung von globalen Konzernstrategien*. Wiesbaden: DUV.
- Leibinger, B. (2005). „Trumpf GmbH & Co.KG“, in *Deutsche und japanische Antworten auf die Herausforderungen des globalen Wettbewerbs*. Ed. Berger.
- Macharzina, K. & Oesterle, M.J. (Eds.). (2002). *Handbuch internationales Management*. Wiesbaden: Gabler.
- Nahrendorf, R. (2008). *Der Unternehmer-Code*. Wiesbaden: Gabler.
- Peng, M. W. (2009). *Global Business*. Boston: South-Western Cengage Learning.
- Perlitz, M. (2004). *Internationales Management*. Stuttgart: UTB.
- Porter, M.E. (1989). „Der Wettbewerb auf globalen Märkten“, in *Globaler Wettbewerb*. M.E. Porter. Wiesbaden: Gabler, 17-68.
- Schmidt, A. (2004). „Globalisierung als Chance für den Mittelstand“, in *Der Betriebsberater*, 3, 2-7.
- Schneider A. (2004). *Internationalisierungsstrategien*. München: Meidenbauer.
- Silvius, G. (2004). „IT in Small Business“, in *Innovations through Information Technology*. Ed. M. Khosrowpour. Hershey: Idea Group Inc, 316-318.
- Simon, H. (1996). *Die heimlichen Gewinner*. Frankfurt a.M.: Campus Verlag.
- Subhash, C. J. (2003). *Toward a Global Business Confederation*. Westport: Greenwood Publishing Group.
- Tilly, R. H. & Welfens, P. J. J. (2000). *Economic Globalization*. New York: Springer.
- Welge, M. K. & Holtbrügge, D. (2001). *Internationales Management*, Stuttgart: Schäffer-Poeschel.

Yeung, H. W. (2005). "Transnational corporations from developing economies", in *Encyclopedia of International Development*. Ed. T. Forsyth. New York: Routledge, 695-697.

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Internationalization of Micro and Small Locally-Owned Firms from Emerging Economies: The Role of Personal Factors

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Abstract

This paper examines the impact of Personal factors on the internationalization of micro and small, locally-owned firms from an emerging economy. It drew on the logistic regression model to analyse the probability of a firm internationalizing given that its founder/owner possesses certain personal attributes. The results reveal that personal factors such as international job experience and foreign travel experience are the most critical in determining whether or not the firm internationalizes. It demonstrates that demographic factors such as age, education level of the owner etc. are less important and behavioural factors are more significant. Public policymakers that are interested in getting more firms to internationalize can use these results as a guide to develop training centres that will encourage specific entrepreneurial behaviours that are germane to internationalization.

Key Words: *Emerging Economy, Internationalization, Small Locally-Owned Firms, Personal Factors.*

Introduction

In small, open economies, all firms have to interact with the international market if they are to become internationally competitive. The small size of the domestic market in these economies does not allow the firms there to operate at their minimum efficient scale which; is critical for them to achieve economies of scale and compete effectively in international markets. Therefore, if these firms are to survive and grow, they will have no option but to internationalize. Fast, affordable communications and the rapid erosion of barriers to trade are enabling micro and small firms² to participate more actively in international trade (Rasheed, 2005, Manalova et al., 2002). It is therefore expected that as the globalization of markets continues, more small and micro firms will pursue a strategy of internationalization.

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² These refer to firms that have 100 or less employees. These firms, for the purpose of this study, have to be locally-owned. This will alleviate any resource bias in terms of the firm's ability to internationalize.

However, with internationalization there are many risks. For example, because of the large stock of resources that internationalization requires, it may spread the small and micro firms' resources too thinly. Further, for small and micro firms in very competitive sectors (e.g. agriculture, manufacturing etc.) because of their (the sector's) lower growth rate and innovation, the source of competitive advantage is generally located in the human capital (personal factors) of the owner or entrepreneur (Chandler and Jansen, 1992, Brush & Changanti, 1998 etc). The personal factors of the entrepreneur will compensate in many cases for the lack of other physical resources (Bloodgood et al., 1996) and thus can provide a strong source of unique advantage for micro and small firms that internationalize. Indeed, this is an important area of research that has been untapped in emerging environment. Where the research exists, it generally focused on large or multinational firms (Das, 1994, Christensen et al., 1997 etc.) while small and micro firms are left untapped. The assumption it seems is that, what works for large and multinational firms can also work for small and micro firms.

Importantly, because small and micro firms are not merely scaled down version of larger firms but, have their own idiosyncratic features, to understand the role of personal factors in the internationalization of these firms, separate analyses have to be done. Indeed, in a recent study of the impact of managerial influence on exporting, Leonidou et al., 1998 called for a systematic exploration of the relative impact of each managerial factor on internationalization. Moreover, other scholars (e.g. Westhead 2005, Oviatt, 2005, Westhead et al., 2004) call for the research to be extended into emerging environments. For, in these environments, personal factors are generally less sophisticated when compared to more developed environments. For example, macro economic stability is generally absent these countries due mainly to their high debt burden, socioeconomic conditions are generally low and trust, which is an important element in building internationally competitive operation is generally very low. Although these conditions generally characterise emerging environments, it must be noted that this group is heterogeneous thus conditions may differ across countries. For example, literacy rate maybe high in some countries (Barbados with over 90 per cent) and low in others (Jamaica with 75 per cent). Therefore, it becomes important to understand the role of personal factors in the decision to internationalize in micro and small firms from these emerging environments.

This research will differ from previous work in that it does not focus entirely on age and size as is customary in the international entrepreneurship literature (Calof, 1994, Westhead et al.,

2001) but, it considers the role of human capital, a very important factor in small and micro firms' decision making. Small firms face other challenges separate and apart from age and size in their move towards internationalization. One such challenge is related to their limited resource stock. They have limited financial resources, physical assets, human resources etc. This will prevent them from developing sophisticated strategies for internationalization. However, personal factors might help these firms to overcome the inadequacies in these other resources. For example, entrepreneurs may develop social networks that can help them to get their products into the international market (Ellis, 2000). Indeed, human capital factors can become an important source of differential advantage for internationalized micro and small firms (Manalova et al., 2002).

To address the issues at the heart of this paper, the remainder of the paper is organized as follows: The next section will present a review of the literature relating to human capital and small firms' internationalization. Here, we will draw heavily on the export behaviour stream of literature to develop theoretical relationship between personal factors and the firm's decision to export or not. Following this review, the next section will present the method that was used to collect the data for the research. Here, the data collection method will be discussed along with the analytical techniques. The next section will present the findings from the analysis while the final section will present a discussion of the findings and provide some concluding remarks.

The Extant Literature

The internationalization literature is very extensive and disjointed. It is generally approached from three perspectives namely: process theories (beginning with the Nordic School), export development processes and recently international entrepreneurship (Coviello & Jones, 2004, Rialp et al., 2005, Miesenbock, 1988 etc). The common thread that binds these perspectives however; is the role of human capital in the internationalization process. Indeed, Aaby and Slater, (1989) note that personal factors are the most essential element in determining whether or not the small firm internationalizes. Further, the literature on internationalization suggests that various dimensions of human capital differentiate between those firms that internationalize and those that do not. These include: experience and skills, perceptions of the firm's environment, the international orientation of the entrepreneur and demographic characteristics (e.g. age, education, gender etc) of the entrepreneur. All these human capital

characteristics can be characterised as a resource in the firm (Bloodgood et al., 1996). These resources, according to the resource-based view of internationalization, can determine a firm's potential for growth and survival as well as providing a better basis for sustained competitive advantage (Moen 1999, Bloodgood et al., 1996, Williams, 2007). Indeed, human resources form a basis upon which firm strategies are created especially in micro and small firms as they do not have large stocks of other resources such as financial capital, technology etc.

Human resource according to Penrose, (1980) is embodied in the employees of the firm. Some scholars refer to this resource as human capital (Becker, 1964). Human capital is seen as the accumulation of personal attributes (e.g. knowledge, personality, experience etc.) that will allow human beings to function (Pena, 2002). Becker (1964) the most seminal work on this concept, sees human capital as knowledge embodied in people. This knowledge is a critical resource for running the operations of the firm (Cooper et al., 1994). For the new and small firm, human capital resource is normally embodied in the entrepreneur. Westhead et al., (2001) see the entrepreneur as the provider of tangible and intangible resources to the firm. They argue that these resources are the properties of individuals who have accrued them through education and experience. The experience, skills and competencies which the entrepreneur possess are generally regarded as critical human capital resources influencing decision making in the firm (Storey, 1994, Mathur, 1999, Manolova et al., 2002). This review will focus specifically on those critical measurable and easily identifiable resources which the entrepreneur gathers through education and experience. They will be used to derive conclusions about the role of personal factors in influencing the internationalization of micro and small locally-owned firms.

There are also other variables that shape the entrepreneurial orientation of the owner (e.g. risk taking, proactiveness, innovativeness etc.) and are critical for internationalization processes. However, these variables were not captured in this research as the surveyed firms are from the traditional small business category that does not show signs of entrepreneurial ambitions. In the pre-testing phase of the research instrument, these attributes were not seen as critical for business operations.

Research Variables and Hypotheses Development

Entrepreneur's Age

In the small firm, decision making is normally concentrated in the hands of one or a few individuals. This individual is normally the owner of the firm. In the entrepreneurship literature, s/he is referred to as the entrepreneur (Beaver, 2002, Coviello & Jones, 2004, Covin & Slevin, 1991). The knowledge which this individual brings to the firm is seen as a valuable resource which can lead to the firm gaining some competitive advantage in the market place (Barney, 1991, Andersen & Kheam, 1998). Researchers consider the age of the entrepreneur as a reflection of life and learning (Westhead et al., 2001) thus in the context of the resource-based theory it is seen as a proxy for the level of knowledge the entrepreneur brings to the firm. From a resource -based view, it is argued that, the older the entrepreneur the higher will be his stock of knowledge thus, the more valuable his age is to the firm. A greater stock of knowledge is more likely to lead to competitive advantage thus, better positioning the firm to enter foreign markets.

It can be argued that; older entrepreneurs, who have been operating in business for a long time, will have a better understanding of operational issues, obstacles, and general business know-how. This experience will give them enough confidence to take on business in the foreign markets where business practices are different and uncertainties are high. Although the export market is different in many respects compared to the domestic market, the ability to overcome problems in the domestic market will serve as a re-enforcement for taking on more complex problems. Younger entrepreneurs, who have not had such experience, would possibly be overwhelmed by obstacles in the exporting business and thus shy away from such activity.

Age can also be a reflection of life long personal networks. Social networks can be viewed as a valuable resource that will give the firm a competitive advantage in the market place (Ellis, 2000). Older entrepreneurs, because of their length of time in business, would build up essential contacts and network. These contacts and networks will help firms to get orders that

they would otherwise not have gotten in the export market (Dana & Wright, 2004, Johanson & Vahlne, 1990, Coviello & McAulley, 1999, Coviello & Munro, 1997, Westhead, 1995). For younger entrepreneurs who are just entering the business arena, they may not have these contacts and networks thus making them less likely to get orders from the export markets. Indeed, the role of networks (social and business) in helping small businesses to get into international markets is well appreciated (Dana & Wright, 2004, Buckle & Ghauri, 1999, Coviello & Munro, 1997, Coviello & McAulley, 1999, Johanson & Vahlne, 2003, Coviello & Jones, 2004 etc.).

Following these theoretical expectations from the resource-based view logic, it is not surprising that the empirical literature shows that there is a positive relationship between export propensity and the entrepreneur's age (e.g. Usric & Czinkota, 1989). Although these arguments may hold in some studies, there are other studies which found that exporting firms do have younger managers than non-exporting firms (e.g. Dichtl et al., 1990, Jaffe et al., 1988 etc.). This observation can be explained using the logic that explains the importance of physical energy as a valuable resource in the firm. Age can be a reflection of the store of physical energy which the entrepreneurs possess (Storey, 1994). Indeed, this can become a critical resource in determining the firm's competitive advantage in foreign markets. Exporting takes a lot of time and energy (e.g. it requires regular travel to foreign countries, constant negotiation with distributors etc.). Therefore, it will require a lot of physical energy to take on such onerous task. The reasoning is that; younger persons will more than likely have a higher store of energy than older ones. Therefore, they will be better able to take on extensive travel, longer work hours etc. These services, the resource-based theory of venture internationalization would argue, can help the firm to gain a competitive advantage thus, better positioning it to enter foreign markets.

However, theorists from the networking persuasion believe that network is much more important than physical energy in selling abroad. Moreover, network theory suggests that with a wider social and business network, firms' ability to sell their products abroad will be greatly improved (Coviello & McAulley, 1999, Coviello & Munro, 1997). Thus, we expect that firms with older entrepreneurs will be more likely to become exporters. This relationship is captured in the hypothesis below:

H₁: Firms with older owner/founders will react positively to export stimuli and make the decision to enter the export market

Educational Background

Entrepreneurs provide valuable resources to their firms accrued through their educational experience (Cooper et al., 1994). Researchers contend that entrepreneurs with higher levels of formal education are more likely to have a broader international outlook and thus being better able to evaluate the benefits from International Business (Obben & Magagula, 2003. Leonidou et al.,1998). It is generally acknowledged that education enhances the knowledge and capabilities of an individual, therefore providing greater analytical power to deal with complex issues in the International Business Arena (Cooper et al., 1994, Becker, 1964, Mathur, 1999). Therefore, education becomes an invaluable asset which is important for the firm's competitive advantage.

Studies which have empirically tested this variable found mixed results regarding its impact on export performance. Some studies found education to be a strong discriminator between exporters and non-exporters (e.g. Daniels & Guyboro, 1976, Simpson & Kujawa, 1974, Keng & Jiu, 1989, Dichtl et al., 1990 etc.). Other studies found no statistically significant difference between exporters and non-exporters based on the entrepreneur's educational background (Obben & Magagula, 2003).

Although these studies found no significant relationship between education and export propensity, this does not devalue the importance of this resource as a critical asset in enhancing the firm's competitiveness and thus make it more amenable to enter foreign markets. What it implies is that; for modelling purposes, education is a redundant variable. Education will pass on the requisite skills to build the networks and contacts in the export market, win negotiations, raising finance etc. which are critical in improving the firm's competitiveness and enhancing its ability to enter export markets. Therefore, these elements become more important in the export decision making process than solely having a formal education (Cooper et al., 1994). Possessing high academic qualifications will not lead to success of a firm (Storey, 1994). It is how and what this qualification is used for (e.g. problem solving, motivation etc.) which is important. Therefore, it is not having a formal

education that is important for exporting; it is the benefits to be derived from having this education (e.g. self confidence, motivation, analytical skill etc.) that really matters.

For the purpose of this study, education is seen to be a critical resource which will give the firm a competitive advantage and better position it to enter the export market, because it affords the entrepreneur a higher analytical power and a more open-minded approach to global issues. With higher education, one is more open-minded and thus more welcoming to new ideas, for example, expanding ones market to achieve higher profitability. Highly educated entrepreneurs are also likely to be more interested in international affairs thus, being in a better position to spot opportunities in the international market. Education will also enhance an individual's negotiation skills, increase his/her personal and business networks, and improve his/her ability to raise finance for business operation. With all these benefits accruing from having a higher level of formal education, it is expected that education as a human resource will play a critical role in shaping how the firm responds to export stimuli and make the decision to enter foreign markets. The relationship between the entrepreneur's educational background and the firm's export propensity is thus summarized in the following hypothesis:

H₂: Small firms with owners/founders that are highly educated will react positively to export stimuli and make the decision to enter the export market.

Previous Job Experience

The previous professional experience of the entrepreneur can provide the firm with detailed knowledge of the business environment which it now operates in (Westhead et al., 2001). This knowledge can allow the firm to develop more appropriate niche markets thus gaining a greater competitive advantage in the market place. This will thus give the firm greater incentive to enter international markets. It has been demonstrated empirically that entrepreneurs who have had previous export experience are more likely to engage their firms in exporting (Leonidou et al., 1998). This argument rests on the assumption that the experience gained in the previous job will enhance entrepreneurs' business and personal networks, and also their experience in international business (Bloodgood et al., 1996). Because of these benefits, it is argued that this personal attribute will increase the odds of the firm becoming an exporter (Reid, 1981).

Following the logic of the internationalization process theory (Johanson & Vahlne, 1977, 1990) it can be argued that previous professional experience (especially from the same industry) will reduce psychological distance thus, enabling the firm to take advantage of international business opportunities. From past job experience, the entrepreneur would have learnt about foreign markets' cultures and business practices thus being better able to take on operations there.

This research argues that previous professional experience is a critical human capital resource for the firm because of the business and personal networks it provides and also the reduction of "psychic distance" through the acquisition of knowledge and experience. Entrepreneurs who have operated in the export market before would have met potential customers and distributors. They might have formed business relationships or even personal friendships over this time. These relationships can now serve as an avenue through which the firm can get information about export markets and also as a means of getting its products into these markets. As argued before, these types of networks serve as an important mechanism for small firms to sell a portion of their sales abroad.

The other argument is that, previous experience (those specifically related to exporting) will provide entrepreneurs with a working knowledge of the export market. It will give them an idea of the possibilities and practicality of exporting (Westhead, 1995). This will thus enable them to feel more comfortable operating in these markets compared to someone who has never operated there before. This confidence may also allow them to be more aggressive in seeking market opportunities. The entrepreneur will be in a better position to evaluate the feasibility of foreign market opportunities since s/he has an idea of the obstacles that will be faced.

Our interpretation of the empirical literature regarding this variable is that there seems to be a general agreement that it has a positive effect on the firm's export propensity (Dichtl et al., 1990, Ustric & Czinkota, 1989, Leonidou et al., 1998). As a result, we will summarize the theoretically expected relationship in the following hypothesis:

H₃: Small firms with owners/founders who have had previous work experience in an exporting firm will respond positively to export stimuli and make the decision to enter the export market.

Foreign Language Proficiency

The possession of competency in a foreign language by entrepreneurs can provide the firm with a competitive advantage in dealing with customers in international markets. According to the resource-based view of venture internationalization, firms which possess such a valuable resource will have a greater proclivity towards internationalization (Bloodgood et al., 1996). Empirically, this variable has also received a lot of attention. Leonidou et al., (1998) in a review of 46 studies looking at managerial characteristics and the firm's export performance found that over 50 percent of those studies accounted for this variable in their empirical analysis. The majority of studies conclude that firms with entrepreneurs who have a good command of a foreign language are more likely to enter export markets (e.g. Lautanen, 2000, Obben & Magagula, 2003, Dichtl et al., 1990, Karafakioglu, 1986 etc.). However, there are studies that found no relationship between the entrepreneur's language competency and export propensity (e.g Daniels & Guyboro, 1976, Ursic & Czinkota, 1989 etc.). Like Daniels and Guyboro, (1976), Obben & Magagula, (2003) also found that when decision makers are monolingual i.e. speak only their native language, there is often a negative relationship with export propensity.

The literature points out that it is proficiency in a foreign language that distinguishes between those firms that export and those which do not. Because of the territorial environment in which this study was done, we expect that the majority of entrepreneurs will be proficient in their native language (English). Moreover, because most of the country's exports go to the United States, an English speaking market, then, foreign language proficiency may not be an important resource for these firms to have. However, in an increasingly liberalized trading environment where Non-English speaking markets are becoming very important, Jamaican entrepreneurs will have to improve their proficiency in other languages besides English. Indeed, with Jamaica now signing trade agreements with Non-English speaking countries, it shows that foreign language proficiency will become an important resource so as to better position these firms to take advantage of business opportunities in these markets.

Most importantly, foreign language competency becomes an important resource to the firm especially relating to the exporting function because of the benefits to be derived from it. Having competency in a foreign language will facilitate effective planning and control of business operations in the export market. It will also assist in understanding foreign business practices, improves communication and interaction with foreign customers and helps to establish social and business contacts. With these specific advantages to be derived from the possession of this resource therefore, given the reduction in trade barriers in the international trading environment, there is expected to be an increase in the number of firms with multi-lingual entrepreneurs taking on exporting.

If the logic of the process theory of internationalization is to be followed then, one would expect that competency in a foreign language will reduce the “psychic distance” to that country. With reduced psychic distance, entrepreneurs will exude greater confidence in carrying out business in these markets (O’Grady & Lane, 1996, Johanson & Vahlne, 1977). As a result, we expect the export propensity of the firm to increase when its owner (entrepreneur) is competent in more than one language. This relationship is summarized in the following hypothesis:

H₄: Small firms with owners/founders who are proficient in a foreign language will respond positively to export stimuli and make the decision to enter the export market.

Foreign Travel Experience

The most important point from the stage theory of internationalization is that, the more international experience in a firm, the better able it is to expand abroad. Indeed, from the resource-based theory of venture internationalization, international experience is seen as a valuable asset from which the firm can gain a competitive advantage thus better enabling it to enter foreign markets. Bloodgood et al., (1996) argue that some of the international experience in the firm is located within individuals who form these firms (entrepreneurs), thus they may capitalize on this experience and expand internationally.

Having lived, worked or studied abroad will provide entrepreneurs with some international experience. They will have a better knowledge of foreign cultures, business practices and

laws and regulations in those societies. This knowledge will better prepare them to take on business in foreign markets which are more complex and different from the domestic market. It will also help to reduce the psychic distance to these markets. If stage theory has any validity then, we expect that with reduced psychic distance, more firms with entrepreneurs who have a high level of foreign travel experience will enter export markets.

International experience is also critical for network building, another valuable resource that can provide the firm with a competitive advantage that is crucial for foreign market entry. Foreign travel will allow entrepreneurs to meet prospective customers, identify business opportunities and thus generate foreign sales for the firm's products. This variable has received extensive empirical attention in the literature and the results are biased towards a positive relationship with export propensity (e.g. Williams & Chaston, 2004, Keng & Jiaun, 1989, Dichtl et al., 1990, Obben & Magagula, 2003 etc.). If the logic from both the network theory and stage theory are anything to go by then, from the resource-based view, we will predict a positive relationship between the foreign travel experience of the entrepreneur and the firm's export propensity. This relationship is formally captured in the following hypothesis:

H₅: Small firms with entrepreneurs who have a high level of foreign travel experience will respond positively to export stimuli and make the decision to enter export markets.

Research Method

This research draws on data collected from a field survey of micro and small firms in the agriculture and manufacturing sectors of the Jamaican economy. Importantly, the manufacturing and agriculture sectors were chosen because they have a large number of exporters and non-exporters alike thus, enabling more accurate comparisons. Further, these sectors have shown low export ratios compared to the overall export industry. Manufacturing had an export ratio of 40.06 cents to every dollar of revenue earned in 2000. This is 33 percent below the industry average. This ratio signals the poor export performance of this sector.

Agriculture, although having an export ratio of 64.06 cents to the dollar, over 70 percent of this was driven by export in agricultural services. It shows that merchandise export from this

sector is still very poor. Since both sectors are very large, specific sub-sectors were chosen for this study. These include: fruits, vegetable, essential oil, fish, and tea from agriculture and from manufacturing, the sub-sectors chosen were; baked products, food beverages and tobacco, garment and textile, furniture and fixtures including wood, paper and paper products, printing and publishing, chemical rubber and plastic, and non-metallic products. Moreover, these sub-sectors were chosen because they consist of the bulk of micro and small locally-owned firms in the Jamaican economy (Harris, 1997). These sub-sectors are also consistent with sectors chosen for study in other locales (e.g. Leonidou 1998), thus enabling better comparison of results.

Data collection

There is no comprehensive list of micro and small locally-owned firms in the agriculture and manufacturing sectors in Jamaica. As such, to develop a sample frame for this study, it was important to contact the various institutions in the country that deal with exporting and small business issues. Our contact led us to the JEA, JMA, SBAJ and JTI to get a list of their member firms³. The JMA was not very responsive so we did not get a list from them. The SBAJ provided us with their list of current members in the sectors identified above. The list consisted of 78 members. JTI in collaboration with the JEA provided us with the most current export directory. This directory consisted of 415 firms. This is the most comprehensive list of exporters one can get in Jamaica since; JTI is the country's sole institution which deals with export registration. This means that all firms that are exporting must register with JTI. Of this number, 380 met our criteria for small and micro firms. JTI also provided us with a list of non-exporters that they have worked with over the years. These non-exporters are considered to be in a state of export readiness i.e. they have an exportable product or can bring their product to an exportable level. This list consisted of 332 firms that met our criteria of small and micro enterprise.

All lists from the various institutions were then entered into an excel spreadsheet to check for cross listing and for organizing the JTI list into manufacturing and agriculture firms only (since this list had firms in all sectors of the economy). From this analysis, we found 20 of the SBAJ members that are exporters which did not appear in the JTI export directory, the remaining 58 are non-exporters. When the JTI lists were organized into agriculture and

³ JEA means Jamaica Exporter's Association, JMA means Jamaica Manufacturers Association, SBAJ means Small Business Association of Jamaica and JTI means Jamaica Trade and Invest.

manufacturing firms only, we had 300 exporters and 258 non-exporters falling into the sectors critical to this study. From the combined list, we acquired a total of 320 exporters and 316 non-exporters in Manufacturing and Agriculture sectors. Because of our conceptual definition of small and micro firms, we also scrutinized our list for firms that are apart of larger enterprises. This analysis revealed 10 exporters that are subsidiary of larger firms. These 10 firms were eventually removed from the list. This resulted in a total of 310 exporters and 316 non-exporters as our final sample frame. In total, 626 firms made up our sample frame with 250 in agriculture and 376 in manufacturing. All the exporters in the sample were direct exporters who do not use an intermediary to get their products abroad. The non-exporters interviewed are also firms that have the potential to export directly and do not plug into any intermediary. Table 1 below summarizes these results based on sector and sub-sectors.

Table1a: Distribution of Small Firms by Sector and Sub-sector -Agriculture

SUB-SECTOR	TOTAL NUMBER OF FIRMS	TOTAL NUMBER OF EXPORTERS	TOTAL NUMBER OF NON-EXPORTERS
Vegetables and Fruits	157	77	80
Essential Oils	31	17	14
Tea, Coffee, Cocoa, Cereal	19	10	9
Fish(Fresh Live, Dead) Chilled	43	18	25
Total	250	122	128

Source: Directory of Exporters from JTI & JEA, (2003) and SBAJ members for 2004

Table1b: Manufacturing

SUB-SECTOR	TOTAL NUMBER OF FIRMS	TOTAL NUMBER OF EXPORTERS	TOTAL NUMBER OF NON-EXPORTERS
Baked Products Food Beverages and Tobacco	100	68	32
Garment and Textile Products	92	37	55
Furniture and Fixtures (including other wood products)	80	30	50
Paper and Paper Products	14	10	4
Printing and Publishing	12	4	8
Chemical Rubber and Plastic	40	25	15
Non Metallic Potter and Glass Product	38	14	24
Total	376	188	188

Source: Directory of Exporters from JTI & JEA, (2003) SBAJ members for 2004

Telephone calls were made to all firms in the sample frame to get their willingness to participate in this study. Forty-four (44) exporters and forty-eight (48) non-exporters responded positively to these calls. The interviews were subsequently held with the owners/founders and in some cases, the exporter managers in these firms. Interviews lasted for an average of one hour and focused on the main issue of export market entry decision and personal characteristics of the owner of these firms. From these interviews, a number of variables that capture the major issue under investigation in this paper were derived. In most

cases, the operationalization of these variables was drawn from previous research on the subject. This approach to measurement helps to improve the external validity of the variables.

Measurement of Variables

The human capital variables drawn for this study were taken from previous research on the subject. In addition, other variables such as; firm size, age and product were captured in order to control for other factors that impact internationalization of small and micro firms. Adopting variables from previous research helps to improve their construct validity and also to enable greater comparison with other research from different environments and those that have similar characteristics to Jamaica. Table 2 below summarises these measurements.

Table 2: Research Variables⁴

VARIABLES	OPERATIONAL MEASURE	PREVIOUS STUDIES
<i>Dependent Variable⁵</i> Internationalized versus Non-Internationalized	Dummy variable 1= exporter 0 = non-exporter	Obben & Magagula, 2003, Rodriguez & Rodriguez, 2005, Cavusgil & Nevin, 1981, Yaprak,1985,Caughey & Chetty, 1994, Burton & Schlegelmilch, 1987
<i>Independent Variables</i> <i>Firm Factors</i>		
Firm Size (NEC)	Number of employees	Pope, 2002, Mehran & Moini,1999, Obben & Magagula, 2003, Bilkey, 1982
Firm Age (YCS)	Number of years since firm was legally established	Keng & Juana, 1989, Das, 1994, Daniels & Guyburo, 1976, Brouthers & Nakos, 2005
Standardized Product (SDP)	Dummy variable 1= no changes made to the product for export 0= changes made to the product before exporting	Christensen et al., 1987, Tybjee, 1994, Vernon,1966, Tookey, 1964, Madsen & Servias, 1997, Diamantopoulos & Inglis, 1988, Brouthers & Nakos, 2005
Product Quality (PQ)	Firm's quality	Miesenbock, 1988,

⁴ The abbreviations in bracket are used in the models to represent the variables

⁵ Because of the difficulty in capturing firm level data in an environment such as Jamaica, it was very difficult to get data on sales or profit. Therefore other measures of internationalization such as export intensity (export sales as a percentage of total sales) could not be used. Further, to ensure that the firms chosen for this analysis are serious exporters, the study only included firms that export at least twice per year.

VARIABLES	OPERATIONAL MEASURE	PREVIOUS STUDIES
	accreditation 1= firm has quality accreditation 0= otherwise	Mittelstaedt et al., 2003, Hatten, 1997
The Firm's Technology (TS)	The firm's spending on R&D as a portion of sales	Moen, 1999 , Burton & Schlegmilch, 1987, Tybjee, 1994, Rodriguez & Rodriguez, 2005
<i>Human Capital Factors</i>		
Age of Entrepreneur (EA)	Years of Business experience	Obben & Magagula, 2003, Ross, 1989
Foreign Travel Experience (EFT)	Dummy variable 1= worked or lived abroad for > 1 year 0= otherwise	Aaby & Slater, 1989, Daniels & Guyburo, 1976, Williams & Chaston, 2004
Foreign Language Proficiency (EFL)	Dummy variable 1= speak foreign language 0= do not speak foreign language	Obben & Magagula, 2003, Daniels & Guyburo 1976, Williams & Chaston, 2004
Education Level (EDU)	Last school which the entrepreneur attended 1= Primary 2= Secondary 3=Vocational Training College 4= University 5= Other	Obben & Magagula, 2003, Keng & Jiuang, 1989, Manolova et al., 2002, Brouthers & Nakos, 2005
Previous Job Experience (EPEE)	Dummy variable 1 = have worked in a senior position in a company that does	Yaprak, 1985, Aaby & Slater 1989, Philp, 1998 Westhead et al., 2001

VARIABLES	OPERATIONAL MEASURE	PREVIOUS STUDIES
	exporting before starting own business 0= Otherwise	

Analysis of Data

Due to the dichotomous nature of the dependent variable, a model of the qualitative genre was deemed most suitable for analysing the data. The logit model was chosen as the tool to carry out the data analysis. It will help us to predict the likelihood of a firm internationalizing or not, given the human capital characteristics of its owner. Further, because of the lack of a comprehensive sample frame for small and micro businesses in Jamaica, and we do not know the true population mean and variance thus, not sure about the normality of the population, the logit model helps us to overcome this problem. It is less sensitive to violation of the normality assumption of the model error compared to discriminant analysis. Indeed, the logit model will produce similar results to that of the probit model, thus there is no strong rationale for using one over the other except that the probit model can be a bit tedious to use (Gujurati, 2003). Below, we will share the results obtained from the analysis of the data.

Results

This research had set out to understand the impact of human capital factors on the decision of small and micro locally-owned firms in Jamaica to internationalize or not. In other words, we tried to determine what factors (both human and firm) would influence micro and small firms from an emerging environment to export their products abroad. Indeed, the results from this analysis show some very interesting findings. Table 3 below shows the results of the model when all the variables were analysed.

Table3: Logistic Regression- Unrestricted Model (N=92)

<i>Independent variables</i>	β	<i>Wald</i>	<i>Sig.</i>	<i>Exp(β)</i>
Constant	-1.74	1.32	.25	.18
EA	-.02	.31	.58	.99
EFL	-1.22	1.57	.21	.30
EFT	1.91*	4.78	.03	6.77
EPEE	1.51*	6.65	.01	4.54
EDU	-.03	.02	.89	.97
NEC	.04*	6.38	.01	1.04
SPD	1.84*	9.04	.00	6.27
PQ	1.50*	3.82	.05	4.46
YCS	-.04	.06	.80	.96
TS	-.59	1.98	.16	.55
-2LL(Initial Model)	127.37			
-2LL(Final Model)	86.13			
χ^2 (df) (Final Model)	41.24 (10) **			
χ^2 (df) Hosmer & Lemeshow test	11.71 (8) ***			
Nagelkerke R ²	.48			
R ² _L	.32			
% Correct Prediction	82.6			

* Variables are significant at the 5% level of significance

** Statistic is significant at the 5% level of significance (p=0.000)

*** Test is non-significant at the 5% level of significance (p=.17)

R²_L = 1 - (Final model -2LL/ Initial model -2LL)

The results reveal that only two of the human capital factors appear to significantly impact on the firm's ability to internationalize. These are the owner's foreign travel experience (EFT) and the owner's previous job experience (EPEE). Of the firm factors, the results show that the nature of the product (standardized product, high quality product) and the number of employees appear to have the greatest impact on whether or not the firm internationalizes.

These results appear to be quite robust as the model diagnostics are all in line with the conventional measures of robustness. The model has a predictive accuracy of 82.6 per cent, the R-squares (both Nagelkerke and McFadden or model R^2) are high (.48 and .32 respectively) meaning that the model explains a significant percentage of the variation in the dependent variable. Further, the model chi-square as captured by the Hosmer and Lemeshow test is non-significant, a desirable result which shows that the observed and the fitted models are the same.

Although the model appears to be quite robust, to ensure that no individual data point is skewing the results, a sensitivity analysis was done. This analysis was carried out by arbitrarily dropping ten data points. The results reveal that the model remains stable after this operation. We also dropped variables alternatively in order to ensure that no one variable was exerting undue influence on the model. Again, this exercise proved that the model remained stable. These results are shown in Table 4 below.

Table 4: Model with reduced sample size (N=82)

<i>Independent variable</i>	β	<i>Wald</i>	<i>Sig.</i>	<i>Exp(β)</i>
Constant	-2.29	1.36	.24	.10
EA	-.01	.17	.67	.98
EFL	-1.96	2.53	.11	.14
EFT	3.10*	7.69	.00	22.19
EPPE	1.34*	3.78	.05	3.83
EDU	.06	.043	.83	1.06
NEC	.05*	6.23	.01	1.05
SPD	3.01*	13.15	.00	20.28
PQ	1.72**	3.48	.06	5.58
YCS	-.21	1.01	.31	.81
TS	-.57	1.41	.23	.56
-2LL(Initial Model)	113.67			
-2LL(Final Model)	66.23			
χ^2 (df) (Final Model)	47.44 (10) ***			
χ^2 (df) Hosmer& Lemeshow test	8.5 (8) ****			
Nagelkerke R ²	.58			
R ² _L	.42			
% Correct Prediction	81.7			

*Variables are significant at the 5% level of significance, ** Variables significant at the 10% level of significance

*** Statistic is significant at the 5% level of significance (p=0.000)

*** *Test is non-significant at the 5% level of significance (p=.39)

$$R^2_L = 1 - (\text{Final model } -2LL / \text{Initial model } -2LL)$$

Further, we also analysed the model in a reduced form (i.e. with only significant variables) in order to validate the claims of robustness. In this case, the coefficients turned out to be stable and robust as well. Table 5 below shows these results.

Table 5: Restricted Model

<i>Independent Variables</i>	β	<i>Wald</i>	<i>Sig.</i>	<i>Exp (β)</i>
Constant	-2.64	17.53	.00	.07
EFT	1.25*	3.04	.08	3.51
EPEE	1.40*	6.12	.01	4.08
NEC	.04*	6.56	.01	1.04
SPD	1.86*	10.06	.00	6.29
PQ	1.14**	3.09	.07	3.14
-2LL(Initial Model)	127.37			
-2LL(Final Model)	90.35			
χ^2 (df)-(Final Model)	37.02 (5) ***			
χ^2 (df) Hosmer & Lemeshow Test	4.22 (8) ****			
Nagelkerke R2	.44			
R^2_L	.29			
% Correct Prediction	78.3			

* Significant variables at the 5% level, ** Variables significant at the 10% level of significance

*** Statistic is significant at the 5% level of significance (p=0.000)

**** Test is non-significant at the 5% level of significance (p=.84)

$$R^2_L = 1 - (\text{Final model } -2LL / \text{Initial model } -2LL)$$

Clearly, the results from the analyses are robust and stable. They either support or disprove the theoretical relationships proposed in the earlier sections of the paper. In most cases, the

results are not surprising but are quite interesting based on the study context. The discussion below will build on this point.

Discussion

The aim of this study was to examine the role of personal factors (human capital resources) in influencing the decision in micro and small locally-owned firms from an emerging economy (Jamaica) to internationalize. In particular, we compared the human capital resources of the owners/ founders of those firms that are exporting their products abroad to those that have never exported abroad. From the analyses, we arrived at some important conclusions which are discussed below.

Personal Factors and Internationalization

The results indicate that some personal factors are more important in driving the decision to internationalize than others. In this case, the level of foreign travel experience of the owner/founder and the previous job experience of the owner/ founder are most critical in determining whether or not the firm internationalizes. These factors, it appears, enable the owners to possess the skills necessary to conduct international business arrangements (Manalova et al., 2002). Indeed, they may allow the owner/founder to establish personal or business networks and relationships that are critical for conducting international business arrangements. These characteristics will also give the owner/founder a more positive perception of the international environment thus, increasing the likelihood of them internationalizing their firms (Ditch et al, 1993, Ellis, 2001, Leonidou, 2002).

These findings are consistent with both the literature on process theory of internationalization and international entrepreneurship. Because owners of these small and micro firms are likely to draw on their foreign travel experience when deciding to internationalize their firms, it speaks to the need to reduce psychic distance, a fundamental pillar of the process theory (Johanson & Valhne, 1977). Indeed, the process theory argues that internationalization is a sequential phenomenon in which the firm follows a path that moves from markets of lower psychic distance to those with higher psychic distance. In other words, owners will internationalize into markets that they are more familiar with before they go to more distant markets. This familiarity may arise through greater foreign travel, studying or working abroad or merely vacationing in a foreign country.

The findings also indicate that owners tend to draw on their international or previous job experience when internationalizing their firm. This is consistent with the general theme in the international entrepreneurship literature. This literature posits that founders of international new ventures (born globals) are more alert to the possibilities of combining resources from different national markets because of the competencies they have developed from their previous work (McDougall et al., 1994). Having these attributes (foreign travel experience, international job experience etc.) therefore, allows owners/founders to approach internationalization with less uncertainty and thus enhance the possibility for them to internationalize their firms compared to owners without comparable personal traits. Further, these attributes may help to shape the entrepreneurial orientation of the owner in these firms. The literature on international entrepreneurship (e.g. Oviatt & McDougall, 1994, Rialp et al, 2005) argues correctly that this entrepreneurial orientation (e.g. risk taking, proactiveness, innovativeness etc.) is critical for the internationalization of the firms especially those outside the traditional sectors.

One result that appeared surprising was that factors such as education and age of the owner/founder did not exert significant influence on the decision to internationalize. This finding, however; is consistent with a number of empirical findings which demonstrate that demographic factors do not differentiate between internationalized and non-internationalized firms (Manalova et al., 2002, Aaby & Slater , 1989 etc.). Indeed, it demonstrates that demographic factors are not as important as behavioural factors such as experience and skills.

Concluding Remarks

The need for small and micro locally-owned firms from small, open developing economies to internationalize is becoming more important as the forces of globalization deepen and economic sectors are liberalized. Especially for firms in manufacturing and agriculture, two sectors where competition is very strong in the global market place, small market size will not guarantee any chance of survival as it prevents firms from generating economies of scale, a critical ingredient for international competitiveness. International business will therefore, become a necessary strategy for firms from these economies. This study focused on how personal factors, the strongest resources that these small and micro firms depend on to drive unique advantage in their quest to operate internationally, impact on the firm's ability to internationalize. The findings revealed that foreign travel experience and international job

experience are critical personal factors that owners need to possess in order to internationalize their firm. Owners/founders without these attributes are less likely to internationalize their firms. Other firm factors such as, high quality product and a standardized product were also found to be significant. These findings have some implications for practicing micro and small firm owners/founders, public policy makers who are concerned with getting more firms to internationalize and also other researchers interested in this line of work.

For owners/founders of micro and small firms, the findings reveal that behavioural, not demographic factors are most critical for the internationalization of their firms. The perception of the international environment is crucial as well as the necessary skills to handle international business transactions. If the owner has a positive perception of the international environment and believes that s/he possesses the requisite skills to handle international business transactions, the chance of internationalization will be higher. Further, the research presents a set of factors that impact on the decision to internationalize in small and micro firms. This can be used as a guide for public policy makers to develop training and education centres to encourage specific entrepreneurial behaviours that are germane to internationalization. Training may focus on shaping an international entrepreneurial orientation such as risk taking, proactiveness and innovativeness. Finally, future researchers need to extend this study to include other aspects of human capital and find their link to internationalization. This is an important resource that can give micro and small businesses a unique competitive advantage and therefore, a more complete understanding of the link between human capital and internationalization is needed.

References

- Aaby, N- E. & Slater, S. F. (1989). Management Influence on Export Performance: A Review of the Empirical Literature 1978-88. *International Marketing Review*, 6/4, 7- 26
- Andersen, O. & Kheam, L.S. (1998). Resource- Based Theory and International Growth Strategies: An Exploratory Study. *International Business Review*, 7/2, 71-82
- Barney, J. B. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17/1, 99 -120
- Beaver, G. (2002) *Small Business Entrepreneurship and Enterprise Development*. Harlow: Prentice Hall
- Becker, G.S. (1964) *Human Capital*. New York: Columbia
- Bilkey, W. J. (1982). Variables Associated with Export Profitability. *Journal of International Business Studies*, (pre- 1986), 13/2, 39-55
- Bloodgood, J.M. et al., (1996). The Internationalization of High- Potential U.S. Ventures: Antecedents and Outcomes. *Entrepreneurship Theory and Practice*, Summer, 61- 76
- Brush, C.G. and Chaganti, R. (1998). Business without Glamour? An analysis of Resources on Performance by Size and Age in Small Service and Retail Firm. *Journal of Business Venturing*, 9/4, 331-349
- Brouthers, L.E. & Nakos, G. (2005). The role of Systematic International Market Selection on Small Firms' Export Performance. *Journal of Small Business Management*, 43/4, 363-381
- Buckle, P.J. & Ghauri, P. N. (1999) *The Internationalization of the Firm: A Reader*" 2nd Edition. London: International Thomson Business Press
- Burton, F. N. & Schlegelmilch, B.B (1987). Profile analyses of Non-Exporters versus Exporters Grouped by Export Involvement. *Management International Review*, 27/1, 38-49
- Calof, J. L. (1994). The Relationship between Firm Size and Export Behaviour Revisited. *Journal of International Business Studies*, Second Quarter, 367- 388
- Caughey, M. & Chetty, S. (1994). Pre-export Behaviour of Small Manufacturing Firms in New Zealand. *International Small Business Journal*, April- June, 12/3, 62-68.
- Cavusgil, S. T. and Nevin, J.R. (1981). Internal Determinants of Export Marketing Behaviour: An Empirical Investigation. *Journal of Market Research*, February. 18/1, 114- 119
- Chandler, G. and Jansen, E. (1992). Founder's Self Assessed Competence and Venture Performance. *Journal of Business Venturing*, 7/3, 223-236
- Christensen, R. C. (1979) *Management Succession in Small and Growing Enterprises*. New York: Arno Press
- Christensen, C. H. et al., (1987). An Empirical Investigation of the Factors Influencing Exporting Success of Brazilian Firms. *Journal of International Business Studies*, Fall, 18/3, 61-77.

- Cooper, A.C. et al., (1994). Initial Human and Financial Capital as Predictors of New Venture Performance. *Journal of Business Venturing*, 9/5, 371-395
- Coviello, N. & Munro, H. (1997). Network Relationships and the Internationalization Process of Small Software Firms. *International Business Review*, 6/4, 361-386
- Coviello, N.E. & Jones, M.V. (2004). Methodological Issues in international entrepreneurship. *Journal of Business Venturing*, 19/4, 485-508
- Covin, J.G. & Slevin, D.P. (1991). A conceptual model of entrepreneurship as firm behaviour. *Entrepreneurship Theory and Practice*, 16/1, 7- 25
- Dana, L-P. & Wright, R.W. (2004). Emerging paradigms of international entrepreneurship. In L.P. Dana (ed), *Handbook of Research on International Entrepreneurship*. Cheltenham U.K.: Edward Elgar, 3-15
- Daniels, J. D & Goyburo, J. (1976). The Exporter-Non-exporter Interface: A Search for Variables. *Foreign Trade Review*, 3, 258-282
- Das, M. (1994). Successful and Unsuccessful Exporters from Developing Countries: Some Preliminary Findings. *European Journal of Marketing*, 28/12, 19-3.
- Diamantopoulos, A. & Inglis, K. (1988). Identifying differences between high and low involvement exporters. *International Marketing Review*, 5, summer, 52-60
- Dichtl, E. et al., (1990). International Orientation as a Precondition for Export Success. *Journal of International Business Studies*, 21/1, 23- 40
- Ellis, P. (2000). Social ties and Foreign Market Entry. *Journal of International Business Studies*, 31/3, 443-470
- Gujarati, D.N. (2003) *Basic Econometrics*, 4th Edition. New York: Mc Graw Hill
- Harris, D. (1997) *Jamaica's Export Economy: Towards a Strategy of Export- led Growth*. Kingston: Ian Randle Publishers
- Hatten, T.S. (1997) *Small Business: Entrepreneurship and Beyond*. New Jersey: Prentice –Hall, Inc.
- Jaffe, E. et al., (1988). The Export Behaviour of Small and Medium-Sized Israeli Manufacturers. *Journal of Global Marketing*, 2/2, 27-49
- Johanson, J. & Vahlne, J-E. (1977). The Internationalization Process Of The Firm- A Model of Knowledge Development And Increasing Foreign Market Commitments. *Journal of International Business Studies* (pre- 1986), Spring, 8/1, 23-32
- Johanson, J. & Vahlne, J-E. (1990). The Mechanism of Internationalization. *International Marketing Review*, 7/4, 11-25
- Johanson, J. & Vahlne, J.E. (2003). Business Relationship learning and commitment in the internationalization process. *Journal of International Entrepreneurship*, 1/1, 83-101
- Karafakiouglu, M. (1986). Export Activities of Turkish Manufacturers. *International Marketing Review*, 3/4, winter, 34-43

- Keng, K. A. and Juana, T.S. (1989). Differences between small and medium sized exporting and non-exporting firms: Nature or Nurture”, *International Marketing Review*, 6/4, 27-40
- Lautanen, T. (2000). Modelling Small Firms’ Decisions to Export- Evidence from Manufacturing firms in Finland, 1995. *Small Business Economics*, 14/2,107 -124
- Leonidou, L.C. (1998). Factors Stimulating Export Business: An Empirical Investigation. *Journal of Applied Business Research*, Spring, 14/2, 43- 68
- Leonidou, L.C. et al., (1998). Identifying Managerial Influences on Exporting: Past Research and Future Directions. *Journal of International Marketing*, 6/2, 74- 102
- Madsen, T. K. & Servias, P. (1997). The Internationalization of Born Globals: An Evolutionary Process? *International Business Review*, 6/6, 561- 583
- Manolova, T. et al., (2002). Internationalization of Small Firms: Personal Factors Revisited. *International Small Business Journal*, 20/1, 9-30
- Mathur, V.K. (1999). Human capital base strategy for regional economic development. *Economic Development Quarterly*, 13/3, 203
- McDougall, P. et al., (1994). Explaining the formation of International New Ventures: The Limits of Theories from International Business Research. *Journal of Business Venturing*, 9/6, 469-487
- Mehran, J. & Moini, A. H. (1999). Firms’ Export Behaviour. *American Business Review*, Jan, 17/1, 86-93.
- Misenbock, K. J. (1988). Small Business and Exporting: A Literature Review. *International Small Business Journal*, 6/2, 42-61
- Mittelstaedt, J.D. et al., (2003). How small is too small? Firm size as barrier to exporting from the United States. *Journal of Small Business Management*, 41/1, 68-84
- Moen, O. (1999). The relationship between firm size, competitive advantages and export performance revisited. *International Small Business Journal*, 18/1, 53- 72
- Obben, J. & Magagula, P. (2003). Firm and Managerial Determinants of the Export Propensity of Small and Medium-Sized Enterprises in Swaziland. *International Small Business Journal*, Feb, 21/1, 73- 89
- O’Grady, S. & Lane, H.W. (1996). The psychic distance paradox. *Journal of International Business Studies*, Second Quarter, 27/2, 309-333
- Oviatt, B. (2005) Book reviews - *The Handbook of Research on International Entrepreneurship and Emerging Paradigms in International Entrepreneurship*. *Journal of International Business Studies*, 36/4, 484-487
- Pena, I. (2002). Intellectual capital and business start- up success. *Journal of Intellectual Capital*, 3/2, 180-198
- Penrose, E. (1980) *The theory of the growth of the firm* 2nd Edition. Oxford: Basil Blackwell Publisher
- Philp, N.E. (1998). The export propensity of the Very Small Enterprise (VSE). *International Small Business Journal*, 16/4, 79-93

- Pope, R. A. (2002). Why Small Firms Export: Another Look. *Journal of Small Business Management*, 40/1, 17- 26
- Rasheed, H.S. (2005). Foreign Entry Mode and Performance: The Moderating Effects of Environment. *Journal of Small Business Management*, 43/1, 41-54
- Reid, S. D. (1981). The Decision-Maker and Export Entry and Expansion. *Journal of International Business Studies*, 12/2, 101- 112
- Rialp, A. et al., (2005). The phenomenon of early internationalizing firms: what do we know after a decade (1993-2003) of scientific inquiry? *International Business Review*, 14/2, 147-166
- Rosa, P. & McAlpine, A. (1991) Graduate Career Orientation towards Enterprise. In L.Davies & A. Gibbs (eds) *Recent Research in Entrepreneurship*. Alder-shot: Gower, 73-105
- Rosa, P. (1993). Family Background and Entrepreneurial Activity in British Graduates. In R. Atkin, E/ Chell and C. Mason (eds) *New Directions in Small Business Research*, Aldershot: Avebury/ Gower, 36-55
- Ross, C.A. (1989). Exporters and Non-Exporters of Manufactured Products: The Case of Jamaica. *Journal of Global Marketing*, 3/2, 77-103
- Simpson, C.L. Jr. and Kujawa, D. (1974). The Export Decision Process: An Empirical Inquiry. *Journal of International Business Studies*, (pre-1986) Spring, 5/1, 107-117
- Storey, D.J. (1994) *Understanding the Small Business Sector*. London: Routledge
- Tookey, D.A. (1964). Factors Associated with Success in Exporting. *Journal of Management Studies*, 1, March, 48-66
- Tyebjee, T.T. (1994). Internationalization of High Tech Firms: Initial vs. Extended Involvement. *Journal of Global Marketing*, 7/4, 59- 78
- Ursic, M.L. & Czinkota, M.R. (1989), "The relationship between managerial characteristics and exporting behaviour", *Developments in Marketing Science*, 12, pp 208-210
- Vernon, R. (1966). International Investment and International Trade in the Product Life Cycle. *Quarterly Journal of Economics*, 80, 190-207
- Westhead, P. et al., (2001). The Internationalization of New and Small Firms: A Resource- Based View. *Journal of Business Venturing*, 16/4, 333-358
- Westhead, P .et al., (2004). Internationalization of private firms: environmental turbulence and organizational strategies and resources. *Entrepreneurship & Regional Development*, 6, 501-522
- Westhead, P. (2005). Léo-Dana (ed.by) *Handbook of Research on International Entrepreneurship*, Cheltenham: Edward Elgar, 2004. 864 pp. *International Small Business Journal*, 23/5, 577-581
- Westhead, P. (1995). Exporting and Non-exporting small firms in Great Britain a matched pairs comparison. *International Journal of Entrepreneurial Behaviour and Research*, 1/2, 6- 36
- Williams, D. A. (2007). Competitiveness of Small Enterprises: Insights from a Developing Economy. *Round Table*, 96/390, 347-363

Williams, J.E.M. & Chaston, I. (2004). Links Between the Linguistic Ability and International Experience of Export Managers and their Export Marketing Intelligence Behaviour. *International Small Business Journal*, 22/5, 463-486

Yaprak, A. (1985). A Empirical Study of the Differences between Small Exporting and Non-Exporting US Firms. *International Marketing Review*, Summer, 2/2, 72- 83

Entrepreneurship Research between East and West

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We examine changes in the national origins of research in entrepreneurship and small business using bibliometric analysis of papers in leading journals. The database comprises more than 4000 refereed journal articles in the six leading specialist journals according to SSCI / WoS, that is: Journal of Business Venturing, Entrepreneurship Theory and Practice, Small Business Economics, International Small Business Journal, Journal of Small Business Management and Entrepreneurship and Regional Development. North American authors continue to dominate, but have a declining share of outputs. Within Europe, Spanish authors are rapidly becoming more important. In Asia, Singaporeans are making an outstanding contribution per head of population. International co-authorship is also on an upward trend.

Track: 7. International Entrepreneurship

Missed opportunities? Free Trade Agreements and New Zealand small-firm exporters

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Abstract

In the absence of progress on world trade liberalization, regional free trade agreements (FTAs) have gained increased attention. This paper reports on a privately commissioned qualitative study based on face-to-face interviews with 51 SME owner-managers, most of which were either currently exporters or close to becoming exporters. Five export strategies are identified drawing on prior models of international marketing: sales-driven, relationship-driven, international boutique, arbitrage and market seeder. These models are distinguished by different relationships to the markets and buyers served and the extent of customization in the export offering. Using these models it is explained why SMEs have yet to significantly capitalize on the opportunities provided by New Zealand's recent wave of trade agreements.

Introduction

The negotiation of regional free trade agreements (FTAs) among increasing groups of nations contrasts with the slow progress in agreeing another round of multilateral trade negotiations through the WTO (the “Doha Round”) (Faiola and Laksmi, 2008). Within their more restricted geographical scope, regional trade agreements can bring significant changes in market access and other conditions affecting the ease of international trade. By lowering the barriers to exporting, these agreements are potentially of particular importance to small and medium-sized enterprises (SMEs). In practice, previous studies have suggested that few SMEs are encouraged to become exporters or to expand their existing export activity through FTAs (Julien et al., 1994; Campbell, 1996). If this lack of reaction continues, it means that SMEs are largely missing out from a major area of government initiative designed to promote economic and business growth. More concerning, any failure to respond to increased access to overseas markets risks an intensifying market squeeze on SMEs as FTAs open their domestic markets to increased international competition.

An understanding of the export strategies pursued by SMEs should help identify the barriers to expanding exports. This insight might then be applied in future trade negotiations to increase opportunities for exporters in the SME sector. Adapting the

business environment to suit existing enterprise strategies can be differentiated from efforts to change export behavior to fit the environment as emphasized in studies of the sources of export success. This direction of adjustment has relevance in the context of FTAs and can be seen to have wider justification. First, while there is merit in seeking to identify the characteristics of successful export strategies it is equally important to recognize that choices are frequently constrained and that situational factors influence the success of any export strategy as well as the strategy itself (Piercy 1982; Lee and Yang 1990; Constantine et al. 1996). Situational influences related to the characteristics of enterprises and the nature of the market exported to constrain the selection of export strategy. To the extent that there is limited choice to modify strategies it is necessary to consider how existing practice can be strengthened. Second, it may not be possible to change firm and decision maker characteristics to match those found among successful SME exporters (Brouthers and Nakos 2005: 376). For example, the preponderance of owner management among SMEs makes it hard to modify the profile of the company manager or to change the preparedness to export once exporting has commenced.

The focus of the present study is first to identify and explain the export strategies pursued by a small sample of existing SME exporters. Implicit in this exercise is a perceived need to understand export strategies in relation to the nature of the enterprise and the market served. This requires more detail than given by broad classifications such as the between market concentration versus market spreading strategies (Ayal and Zif 1979; Lee and Yang 1990; Katsikeas and Leonidou 1996) and between customized and standardized export offerings (Jain 1989; Harris 1996; Walters 1997). The reaction of existing SME exporters to a set of FTAs that have recently been concluded by New Zealand is then related to the export strategies that exist among the sample of exporters. From this analysis recommendations are drawn as to how FTAs might be adapted to maximize opportunities for SMEs utilizing the types of export strategy observed in the study. While the primary focus is on adapting the trading environment to SMEs some comment is also made on how exporters might respond to the opportunities already arising from FTAs. The particular national context has a number of distinctive attributes compared with the context of a large industrial economy and this is explained before providing an explanation of the sample selection and the research methodology employed. First, the article makes further connection to the existing literature on the exporting behavior of SMEs.

SME Export Strategies

SME export strategies have been studied mainly from the perspective of seeking to explain the reasons for success or failure (Cavusgil and Zou 1994). This emphasis is justified by the potential policy importance of being able to transfer the attributes of successful exporting organizations and their strategies to aspiring and existing exporters. With this target in mind, various studies have sought to identify the influences associated with high levels of export performance distinguishing between attributes associated with the export firm's owner/manager, the business and the export strategy. Focusing on the strategy components contributing to export success, various studies have examined aspects of the relationship with individual buyers overseas, such as the type of contractual link employed and pricing (Cavusgil 1983; Merrilees and Tiessen 1999); the degree of product or service customization to individual markets (MacPherson 2004); the method for selecting export markets (Brouthers and Nakos 2005); and the choice between market concentration versus

market spreading strategies (Ayal and Zif 1979; Lee and Yang 1990; Constantine et al. 1996). These approaches yield individually interesting results but generally share three limitations (Cavusgil and Zou 1994).

First, there has been a tendency to conduct investigations on the basis that individual firms have a uniform approach to export marketing. The theory of internalization advantages has justified this approach with its suggestion that exporting is based on some firm-level advantage over producers located in the export market (Buckley and Casson 1985; Dunning 1988; Dicken 2000). As well, it is partly a consequence of the use of data that measures a firm's total export activity rather than the performance of individual export ventures. In practice, a small firm may serve two or three overseas markets or have different offerings to the same market. Consequently, aggregating performance to the level of the firm may mask significant variation in the success of a strategy or it may overlook differences in the implementation of the strategy. Second, the measurement of performance is usually in terms of sales or profits and this means that other strategic imperatives can be overlooked. Sales and profits may be long term goals while gaining market entry, building first-mover advantages or reducing domestic market pressure may be of more immediate concern. Third, the absence of agreed indicators for differentiating export marketing strategies and measuring performance has resulted in findings that as a whole are confusing and contradictory. For example, as well as the frequently employed measures of export sales, export growth and profits from exports, other economic indicators of export performance have sometimes been employed including export income dependence, the business commitment to exporting and overseas market acceptance. Confusing and contradictory findings result from the variety of ways that export success is measured. Cavusgil and Zou (1994) respond to the three limitations that they identify by drawing on the structure-conduct-performance perspective on industrial organization (Scherer and Ross 1990). This framework assumes that business strategy is most effective when aligned to the environment in which the business operates, recognizing that: (i) organizations are dependent on their environments for resources; (ii) organizations can manage this dependency by developing and maintaining strategies that allow the acquisition of and adaptation to available external resources. The resulting evaluation framework applies these ideas by judging export performance in terms of its economic success and extent to which it attains strategic goals, and by measuring the performance of individual export ventures rather than a firm's overall export performance. Marketing strategy is examined against a continuum of options that should be selected according to the extent to which the export market demands a customized strategy, or is satisfactorily served by a standardized strategy, with respect to attributes such as promotion, pricing, design of the offering and distribution channels. Strategy selection is envisaged as a contingent process in which certain conditions related to the firm, product, industry and export market require either more or less customization. The purpose of their analysis is to help demonstrate the effectiveness of particular strategies when used in their appropriate context. So, for example, it is argued that a high degree of product adaptation should be sought when a firm has substantial international competence or little experience with the product, the export offering is culture specific or unique, the industry is technology intensive and the export market is competitive (Cavusgil and Zou 1994: 13).

The search for predictors of export success implies that success in export market ventures is within the reach of managers that correctly diagnose their market situation and make the appropriate choice of strategy. This approach may underestimate the

scope for enterprises to replicate the strategies of successful exporters for at least three reasons.

- Successful exporters may follow distinctive strategies but the process through which the strategy was developed and implemented may involve more than judicious management design. Given that exporting frequently involves relationships with individual buyers in overseas markets, questions arise as to the relative contributions of buyers and suppliers in sustaining export ventures. Once a successful export relationship is established it becomes easier to customize the offering and the associated promotion partly as experience assists the identification of opportunities to adapt the product or service. This has been recognized in the call for longitudinal studies that can draw causal inferences between strategy choices and export performance and overcome the limitations of cross sectional evidence (Cavusgil and Zou 1994; Brouthers and Nakos 2005).
- Second, evaluation tends to be of individual strategy components (for example, the extent of customization, distribution channel investment and pricing decisions) not of total marketing strategies (Merrilees and Tiessen 1999). This approach overlooks the way individual components take on a particular significance when put in the context of overall strategy and the marketing challenges being responded to. For example, a broad distinction is frequently made between passive, indirect international marketing based around the use of intermediaries and active marketing strategies that may include investment in joint ventures, overseas offices and licensing arrangements (Cavusgil 1984). The indirect approach has been thought of as a relatively uncommitted export strategy. In contrast, Merrilees and Tiessen (1999: 342) argue that in the context of marketing relationships dominated by foreign buyers, these may endure for considerable time and have been associated with high commitments to exporting. This complexity justifies more attention to studying specific groups of exporters so as to better understand contingent influences on export performance (Katsikeas and Morgan 1994).
- Third, the ability to replicate the strategy of successful exporters assumes an absence of resource and other constraints on decision making. For example, Cavusgil and Zou (1994) identify prior international experience, competence and sustained commitment as contributors to export success. This leads to recommendations that suggest companies should recruit appropriately qualified export managers, accumulate international experience systematically and allocate sufficient resources to capitalize on the opportunities that exist. Such recommendations simplify the challenge facing SME managers both in terms of the ability to commit resources and in terms of the generalized nature of guidance. Advising that export offerings should be customized still requires determining the precise form of the customization and, possibly, the need to prioritize between markets and customers.

Directing attention to why firms follow a specific approach to export market expansion has been one reaction to the limitations of earlier studies (Katsikeas and Leonidou 1996). Perceived barriers to exporting give some insight into export choices but investigation in this area tends to result in a long list of individual constraints (Leonidou 2004). Evidence of how the nature of the perceived barriers change with

the level of export experience (see Suarez-Ortega 2003) adds value to the understanding of export constraints but this line of investigation has not progressed to explaining why exporters operate in the way that they do. This understanding requires insight into the total marketing strategy pursued and its fit with the characteristics of the exporting firm, its export offering and the market environment. In this regard it is perhaps surprising that few SME international marketing models have been identified. Indeed one study identified two previously unknown marketing models ('sales driven' and 'relationship driven') within a sample of 12 exporters that although purposefully selected were not chosen because they were known to contain novel elements (Merrilees and Tiessen 1999). These two models are built around four aspects of a marketing relationship (discussed further below) that have previously tended to be studied in isolation from each other. As well as combining export strategy components in unique ways, these models recognize that approaches generally viewed as unlikely to bring export success can work when applied in a particular way and in a particular context.

Exploring the reaction of existing exporters to a change in their business environment provides opportunity to augment the stock of international marketing models. This possibility was taken in the context of evaluating SME exporter reactions to recently concluded and pending FTAs. The evaluation arose from the desire of New Zealand government officials responsible for trade negotiations to understand the reaction of SMEs to the new export opportunities their agreements were thought to offer. In the research study, exporters rationalized their response to the FTAs through an explanation of the origins of their current strategies, the important elements of these strategies and how they might or might not be adaptable to the change in business environment. This information enables the building of additional international marketing models and incidentally may assist the interpretation of findings of other studies that similarly find few SMEs moving to increase their export activity directly in response to a free trade agreement (Julien et al. 1994; Campbell 1996). As a context to the New Zealand findings, it is appropriate to first give some description of the recent trade agreements and their impact on opportunities for international trade.

New Zealand's Approach to Internationalization

With respect to international trade, New Zealand is primarily an exporter of agricultural commodities. Access to markets is typically restricted by tariff, phytosanitary and food quality regulations as well as having to compete against protected domestic production in the markets that are exported to. This context has made regional bilateral and multilateral trade agreements an important part of New Zealand's international trade policy. By negotiating Free Trade Agreements (FTAs), the Ministry of Foreign Affairs and Trade aims to improve access for New Zealand exporters and investors into overseas markets, to reduce barriers impeding trade and ensure current access is maintained. FTAs are regarded as essential to ensure the ongoing competitiveness for exporters in key markets. Currently New Zealand has FTAs with Australia (a 'closer economic relations' agreement), Singapore, Thailand, Chile and Brunei and China (Table 1), and negotiations for further agreements with Malaysia, Hong Kong, the Gulf Cooperation Council countries are underway. A further regional FTA with Australia and the ASEAN countries has been recently signed (MFAT, 2009).

For New Zealand, the significance of international trade agreements is mainly in expanding export opportunities rather than in offering reciprocal opportunities for business in the partner countries. Since the 1980s, like other small economies New Zealand has had relatively low barriers to international trade. The openness of the economy is not as high as for northern Europe's small economies (Maskell et al., 1998; Perry, 2001) but generally New Zealand operates with only minor impediments to imports and foreign ownership of New Zealand-based assets. Indeed where recent trade agreements are with similarly open economies, notably Singapore and Brunei, they have symbolic as much as substantive trade significance.

Table 1: Overview of New Zealand's Free Trade Agreements

	China	Thailand	Trans-Pacific (Singapore, Chile, Brunei Darussalan)
Goods	96% of tariffs eliminated over 12 years	100% of tariffs eliminated over 20 years	100% of tariffs eliminated over 6 years
Services	Builds on WTO elements. Includes Most Favoured Nation (MFN) Protection elements.	No chapter on services	Builds on WTO elements. Comprehensive MFN
Investment	MFN Compulsory Investment State Dispute Settlement	Some protection elements	No chapter on investment
Intellectual property	Reaffirms WTO protections	WTO protections	Reaffirms and builds on WTO protections
Trade remedies	Anti-dumping measures Agricultural safeguards for dairy products WTO standards confirmed and a	Anti-dumping measures Agricultural safeguards for dairy products WTO standards confirmed and a	Anti-dumping measures Agricultural safeguards for dairy products WTO standards confirmed and a
Technical barriers to trade	confirmed and a bilateral cooperation and consultative mechanism	confirmed and a bilateral cooperation and consultative mechanism	confirmed and a bilateral cooperation and consultative mechanism
Dispute Settlement Mechanisms	Bilateral	Bilateral	Bilateral

Source: Ministry of Foreign Affairs and Trade website (www.mfat.govt.nz/Trade-and-Economic-Relations/Trade-Agreements/Asean/index.php)

Other agreements have more importance in changing market access although none of the markets rank among the top three for any of the country's main export categories. Nonetheless, trade agreements are important to protect existing New Zealand exporters against rivals with FTAs, open new markets for traditional commodity exports, as well as to diversify opportunities for the many small scale exporters that are predominantly involved in non commodity exports. Based on the statistical data available, it is estimated that only 16 percent of all exporting firms are within the agriculture, forestry and fishing industry employing fewer than 100 employees (Ministry of Economic Development 2007). Numerically, most New Zealand exporters are small enterprises with modest export sales: 56 percent of exporters generated less than NZ\$5 million in export sales revenue in 2006 (Ministry of Economic Development 2007). The preponderance of micro exporters is even greater for goods exporters (as opposed to selling services) with 88 percent having an export income of less than NZ\$1 million. In 2006, fewer than 600 firms had exports worth more than NZ\$5 million but these firms generated 90 percent of total export revenue (Ministry of Economic Development 2007).

The target of New Zealand government initiatives is to encourage a diversification and growth in exports. SMEs have a particular role to play in this strategy as they provide a disproportionate share of non commodity exports and are the main pool of enterprises from which new exporters will come (Fabling and Sanderson 2008). Consequently, alongside the negotiation of trade agreements are other policy measures seeking to encourage and support export activity among SMEs. Export data suggest that the policy initiatives are having an impact. There has been a notable increase in activity since the 1990s with the growth in manufactured goods and services being especially significant. Nonetheless business sector associations continue to argue that many aspects of the fiscal environment disadvantage exporters and that government support for exporters is less than that provided to exporters in competitor nations. This context makes it important to assess how far the considerable investment in negotiating trade agreements fits with the export strategies followed by SMEs.

Research Design and Sample Profile

The research reported here comes from a study commissioned by a New Zealand government ministry that sought insight into the reaction of SMEs to a set of FTAs that had either been recently implemented or were at various stages of negotiation. The aim was to explain individual reactions rather than to measure the frequency of different responses. To this end, a small scale study was designed based on intensive, semi structured interviews with SME managers responsible for export marketing decisions in their enterprise. This context conforms to a situation where the aim is to explore 'formation-rich cases' and to 'learn a great deal about issues of central importance to the purpose of the research' (Patton 1990:169). To this end, interviews covered four areas of discussion.

- A profile of the enterprise (size, ownership, overall business strategy) and the owner/manager's personal export experience.
- The firm's current export activity in terms of the product or service offerings, the markets exported to, distribution channels utilized, relationships to buyers and explanations for the current organization of their export practices.

- The process through which the enterprises had commenced and developed its export activity, particular learning experiences and their engagement with public and private sector agencies that support exporting.
- Awareness and experience of FTAs, their impact on actual and planned export activity and explanation of these responses.

The sample for this study was selected purposefully from a publicly available export directory with SMEs defined as independent enterprises employing no more than 100 full time equivalent staff. The sample was selected to include enterprises with different degrees of export experience from being ‘near to exporting’ to having many years of continuous export experience. As well, the sample was skewed toward enterprises with direct experience of the markets now covered by a FTA. To compile the sample, firms were screened through an initial telephone interview and their cooperation sought for a face-to-face interview where the enterprise met the sample targets. Interviews averaged one hour duration and were conducted from December 2007 to February 2008. They were recorded with the resulting interview transcript shared with the interviewee to give opportunity to amend and augment the initial responses.

A total of 51 enterprises were included in the full study of which 43 were currently exporting or had recent experience of exporting. The following discussion is based on the responses of interviewees in these enterprises. In the year prior to the interview, respondent enterprises had total exports valued at around NZ\$240 million (US\$190 million) or around NZ\$5.7 million (US\$4.5 million) per firm placing them as a whole among the country’s more important SME exporters. The range in activity varied from those without current sales, through micro enterprises exporting through postal deliveries direct to end buyers and, at the other extreme, to enterprises with one or more overseas subsidiaries. While the scope of activity varied, most had experience of multiple overseas markets gained over many years (Table 2). Export offerings include horticulture and floriculture produce, wine, processing equipment, natural and animal health products, apparel, software and construction/exploration services.

Table 2: Business and Export Demographics of the Sample Exporters (N = 43)

Export status	Firm Size (FTEs)	No. of Firms	Average years exporting	Top countries exported to	Direct exporter*	Indirect exporter*	Average percentage of export dependence
Less than one year	<50 FTEs	13	1	Australia, UK	10	3	42%
	50+ FTEs	0	-	-	-	-	-
More than one year	<50 FTEs	26	7.6	Australia, USA, Singapore, UK,	13	13	63.5%
	50+ FTEs	12	17.5	Japan, Thailand, Hong Kong	3	9	65.5%

Note: * Indirect exporters utilize commission agents, overseas distributors, export management companies or other third parties to reach buyers. Direct exporters may

sell to end buyers overseas from New Zealand or through overseas subsidiaries, joint venture companies, licensing or other connections.

The present discussion focuses on the identification of marketing strategies, how these strategies explain the reaction to the FTAs and the future implications for the negotiation of FTAs. This discussion draws on the structure of the international marketing models developed by Merrilees and Tiessen (1999) that recognize export strategies as an integrated package of activities selected in response to particular marketing situations. Merrilees and Tiessen (1999) models are based around four aspects of a marketing relationship: the extent and nature of the marketing power held by the exporter; the process through which customers and market intermediaries are selected; the investment in market relationships; adaptation of the marketing mix for export customers. The fourth of these indicators has been amended to capture all forms of market customization. In summary the attributes used to distinguish export strategies are:

- Market power: the more the supplier offering is unique to the supplier and the more that the supplier encourages buyer loyalty and constraints their ability to shift suppliers, the greater is the market power.
- Control over market agents: where sales are made to specific buyers or through market intermediaries identified by the supplier in advance of the sale being made, control over market agents is high. This position of control is contrasted with situations where sales are more or less random to the extent that the country (of the buyer) selects the exporter, not the other way around.
- Relationship investment: where exporters seek to maintain an ongoing relationship with an individual buyer, particular investments are required above those that are required to ensure the satisfactory completion of an individual sale. These investments may include stationing personnel in the overseas market, providing after sales support and increasing the number of home-based staff with direct, personal contacts with the overseas buyer.
- Market adaptation: customization of marketing and export offerings to meet foreign customer needs may include modifications to contract terms, packaging, order volumes and changes to the offering itself such as the technical specifications or materials used.

These attributes are used to distinguish different ways in which SMEs sustain export activity. They do not give a full explanation as to how exporters compete against local producers or exporters from other countries. It is also necessary to recognize specific contingencies to which export strategies are adapted. Factors associated with the export market are the same for all exporters and so do not explain the basis of an individual export business but without these conditions no export of the type of product or service may be possible. Consequently, as well as identifying and illustrating five export marketing strategies that encompass different combinations of the four strategy components, contingencies relevant to each strategy are identified. The strategies followed by the sample of SME exporters are then linked to the provisions of New Zealand's recent FTAs and to respondent reactions to these agreements.

SME Export Strategies

At the most general level, all SMEs rely on niche marketing strategies (Katz 1970; Porter 1985; O’Gorman 2000). This places a heavy emphasis on individually tailored services and products and marketing that stresses uniqueness and differentiation from standard business offerings. SMEs must seek out specialized opportunities and gaps in the market either, because they lack the volume or cost advantages of large scale producers, or both. As soon as it is recognized that mass markets are out of reach, all SME exporting can be seen to rely on some form of niche strategy: either a particular market or market segment is focused upon, or the offering is targeted to specific demands (Hutchinson et al. 2005). Consequently, the description of SMEs as niche exporters does not provide much insight. It is necessary to go further and identify the specific ways that SMEs seek to differentiate their business from each other and from high-volume firms.

Five marketing strategies are identified based on practices that have sustained export activity and that are the basis of an ongoing involvement in exporting that meets the company’s goals. Most respondents with an ongoing involvement in exporting can be allocated to one of these strategies based on their current approach. Enterprises that could not be linked to one of these strategies were principally those in a period of transition that had still to resolve their ongoing strategy. Enterprises using overseas subsidiaries for subcontract work have also been overlooked, although this is an activity potentially benefiting from the trade agreements. The five identified strategies include the two models identified by Merrilees and Tiessen (1999) as well as three that are original to the study. An outline of the models commences with the previously identified models as this helps to establish the distinctive features of the models that are original to the study.

Table 3: SME International Marketing Models

Marketing model	Market power	Control over market agents	Buyer relationship	Market adaptation
Sales driven	Low	Low	Low	Low
Relationship driven	Medium - High	High	High	High
International boutique	Low	Medium	High	Low
Arbitrager	Low - medium	High	Medium	Low
Market seeder	High	High	Low	Medium

Sales-driven international marketing

This marketing strategy is adopted by enterprises that lack market power and that can operate on the basis of sales initiated by the buyer who is also typically the end user. Sales do require some marketing effort but this is not directed at individual buyers and may not even target any particular country. Sales involve one-off transactions that are not dependent on personal familiarity although repeat sales may occur and be encouraged by the suppliers’ proven reliability. Given that the exporter has made no

or minimal prior judgment over where buyers are located there is little product or promotional customization.

This approach to exporting was encountered among micro enterprises that reached export markets through web-based marketing and sales. These businesses were of two types: independent product distributors selling direct to individual consumers, and; contractors supplying business services to government agencies. For the first of these business types, the business model fitted the distribution of health-related products that can be in restricted supply overseas because of regulatory controls. The nature of the regulation restricts local sales but does limit personal use of the products making it possible for individuals to purchase the product from overseas suppliers. As well as exploiting regulatory controls, this type of export venture depends on web-based marketing skills to direct would-be purchasers to their web sites.

Relationship-Driven International Marketing

Relationship strategies are built around the development of close ties to key market intermediaries or customers in the markets exported to. These relationships have typically formed over many years but start from the exporter's possession of a niche product or service that is built upon firm-specific expertise. Investment in the relationship is an ongoing requirement and basis for continued sales and may produce significant customization of the offerings through individual relationships. As sales are relationship-based, there is scope to compete through differentiation, quality and service performance.

Most exporters in the sample follow a relationship-driven strategy. A case involves a company that designs, fabricates and installs meat processing equipment. It exports almost exclusively to one South America country and relies on close links to a small number of large clients with whom it has worked for over a decade. The business deliberately targeted this market based on the size of its meat processing industry and perception that potential customers in this market recognized New Zealand as having particular expertise in the design of meat processing facilities. Commitment to the market includes investment in a fabrication business while design facilities have remained in New Zealand although the home market now generates a minor share of annual revenue.

International Boutique

This export strategy relies on market dispersion as there is limited scope to expand sales in any market given the market niche occupied. The ability to supply multiple markets is facilitated by the limited need to customize the product beyond some market-specific labeling requirements. The nature of the product is such that buyers are motivated by the 'country-of-origin' content so that generic ('New Zealand made') rather than product specific advertising is relied upon. Buyers do not require customization to local tastes or other market characteristics. With limited returns to be obtained from any single market the approach to marketing is comparatively untargeted with respect to locating the first buyers in the market but once a relationship is established the supplier seeks to maintain the buyer's loyalty to their offering.

Wine exporters are the case exemplar of this strategy in our sample. The wine exporters encountered in the study are small scale producers that market their product internationally more on the basis of New Zealand country of origin, region of production and grape variety than an individual vineyard reputation. Low or even no customization to individual markets is a main distinguishing feature from relationship

strategies. Large scale producers with an own-label reputation have capacity for direct marketing to overseas buyers. Small vineyards supply a relatively high-priced product that has limited sales potential in any individual overseas market. A small 'elite' group of buyers are the main sales opportunity for boutique wines taking advantage of overseas interest in wine's of different country- and region-of-origin. Exporters rely on distributors in individual markets to promote the product to relatively price insensitive market niches. Distributors generally have a surplus of potential New Zealand suppliers. This makes distributors reluctant to offer exclusive distribution agreements and puts pressure on New Zealand suppliers to give particular reasons for their wine to be promoted (such as price discounts). As a consequence exporters are continuously searching for market openings rather than relying on settled relationships with distributors committed to their product.

Arbitrager

This strategy is built around establishing market relations to multiple markets only a proportion of which will be utilized over each export period. Operating with surplus market connections gives flexibility to shift sales to where returns can currently be maximized and minimizes disruption from unexpected changes in markets that were intended to be exported to. This flexibility relies on having good contacts in markets that can be called upon even after a period of relative inactivity and that suppliers do not suffer adverse reaction when switching between buyers. Underlying this is the importance of a supplier's reliability based on past transaction performance and the survival of the reputation so that the supplier is not required to invest in relationships themselves.

Exporters of high value, quality sensitive seasonal fresh produce exemplify the arbitrager strategy. Specific growing requirements that constrain supply volumes combined with relatively price elastic demand reduce some of the market instability otherwise associated with fresh food produce. This is accentuated by the quality sensitivities arising from the risks of crop damage during growth (an influence reducing advance supply contracts), harvesting, packaging and shipment and a short shelf life once delivered to the end market. Profitable markets exist for New Zealand exporters but the returns from individual markets can move at short notice requiring agility in shifting supply to current best sales opportunities. Allocation among the selected buyers is determined close to the time of sale according to their competition with exporters from other countries occupying the same seasonal niche as well as harvest volumes and sequencing by competing New Zealand growers. Against this context, individual exporters seek to develop a network of potential buyers in separate markets who can be called upon to accept product at short notice. An exporter of fresh cherries indicated that they had a network of around 50 potential buyers of which typically no more than 10 are called upon in any export season. Acquiring this flexibility can involve some reciprocation in that suppliers may be contacted by buyers to assist in filling market gaps.

Market Seeder

This strategy is about market building, as much as it is (if not more) about securing immediate sales. It is associated with an innovative export offering that is believed to have potential for application in a wide range of markets. Initially the exporter is also a producer of the product but the ultimate goal is to have the innovation accepted as a generic technology that can be incorporated in many products. Should this objective be realized, the export strategy would become focused around licensing offshore

manufacturers and distributors. Immediately and for the foreseeable future there is both a need to develop awareness of the product and uncertainty as to which markets might ultimately grow strongest. In this context, the strategy is to ‘seed’ a large number of markets with initial sales while minimizing investment in individual relationships as the priority is to diversify market connections over different types of customers in different countries.

The exemplar of this strategy is a designer and builder of an innovative form of amphibious boat. The innovation is thought to have capacity to be sold as an add-on to a wide range of conventional boats so that boat manufacturers are hoped to become the main market rather than the company itself directly serving individual buyers. At present the company is required to ‘prove the concept’ and gain acceptance of the amphibious technology. The system has been taken up initially by military, civil defense, recreational and functional users in a range of countries. These markets have been discovered through initial marketing efforts focused on boat shows and publicity events (such as demonstrating the boat’s performance by setting sea crossing records). The diverse uptake adds to the initial marketing challenge but supports the long term vision of licensing the amphibious technology to boat builders rather than the company itself being an exporter of amphibious boats.

Market Strategy Contingencies

The strategies explain how exporting is organized in different ways. This diversity arises as an adaptation to specific product and market characteristics. This has partly been alluded to in the illustrative case studies above and is now elaborated further as it is important to recognize the contingencies that make individual strategies viable (Table 4).

Table 4: Market Strategy Contingencies

Marketing strategy	Exemplar export offering	Strategy contingencies
Sales driven	Internet based sales of nutritional supplements	Buyers are motivated to seek out overseas-based suppliers. Overseas controls on local distribution and promotion can encourage this motivation.
Relationship driven	Design, build & install meat processing equipment	Overseas buyers recognize New Zealand expertise and favor customized solutions.
International boutique	Wine	Country and region of origin is part of the purchase decision leaving scope for small scale, high cost producers.
Arbitrager	Fresh cherries	Short marketing windows for fresh produce; risks to quality.
Market seeder	Amphibious boat	Innovative technology offering additional functionality to an existing product.

The contingencies identified are derived from the enterprises in the study. They are not necessarily the only or main context in which the export strategy may be applied but they do show how strategies respond to particular influences. These contingencies provide the link to understanding the reaction to FTAs as they indicate rigidities in the

way exporting is organized and in the ability to respond to changes brought about by trade agreements. The sales driven marketing strategy relies on consumers in overseas markets having a motivation to search out overseas suppliers and to be willing to order from unfamiliar sources. In this study's exemplar, for some buyers the motivation comes from statutory regulations restricting local sales. Nutritional supplements are regulated in some countries by controls on the ability to make product claims which are not approved by national food or pharmaceutical regulators. These controls restrict the ability to sell products locally but typically do not regulate importation for individual consumption. The availability of web-based purchasing facilitates this connection and is important in allowing direct purchasing by end users. Further influences are needed to retain SME involvement given the possibility of web-based sales becoming concentrated on a few well-known Internet sites. Nutritional supplements offer opportunities for SMEs because of consumer interest in product-related information and marketing centered on the encouragement of a community of users based on shared values. This additional aspect explains the ability to sell to buyers that are not required by regulation to seek out their own overseas supplier.

The relationship strategy has one broad contingency: namely buyer willingness to commit to a relationship with a supplier in preference to maximizing their ability to purchase at 'arm's length' from suppliers selected on a case-by-case basis. This suggests applicability to complex goods or services that are hard to specify completely in advance and to situations where the buyer perceives advantage in the supplier having insight into the nature of their business. Given the buyer's preference for a relationship, the supplier must offer advantages over local suppliers. These advantages may relate to firm specific capabilities or national areas of economic specialization or both. New Zealand is a relatively advanced economy in terms of its productivity and R&D base as well as being a small economy. It has been argued that this has encouraged a particular capacity for customizing technology as the domestic market is too small to enable business to survive on the basis of standardized market offerings. The willingness to recognize and accommodate individual customer requests may be the basis on which business is first obtained.

The international boutique strategy operates in the context of export markets recognizing a country-of-origin reputation and wishing to maintain a diversity of choice. This operates in the context of a product affected by local climatic and growing conditions that produces national and sub national distinctiveness. An association of the product with travel and tourism experiences can assist. The long shelf life of the product and sometimes an added status from being an aged product are part of the contingent context for the strategy.

The export of fresh produce through the arbitrage strategy relies on the product being accepted in a wide variety of markets at the prices needed by exporters. Market demand is based on the immediate product quality and is relatively disinterested in the country-of-origin. Consequently suppliers must compete with suppliers from other countries and are unable to exploit any national reputation advantage. With the produce being in comparatively constrained supply, marketing openings can generally be found provided the supplier has the flexibility to respond quickly to current conditions in individual markets. Challenges in maintaining product quality and practical considerations (labeling the fruit is not feasible) restrict the development of branded produce that retains the opening for small exporters.

The market seeding strategy operates in the context of a technology that can add novel functionality to a broad class of product. The challenge is to demonstrate that there is

demand for the product enhancement. This context can be contrasted with technology affecting production methods or that affects or may become a standard product component. Where the technology offers production efficiencies or has potential to become a standard feature of an existing product, the marketing focus can be concentrated on existing producers. In the case of the market seeding strategy, the innovator needs to demonstrate user interest in the technology so as to persuade suppliers of 'standard' product that their technology has merit.

Exporter Reactions to Free Trade Agreements

Most (20) of the exporters were aware of New Zealand's recently concluded FTAs although only eight had direct experience of trading with a country now covered by one of the agreements. There is general concurrence that the agreements are positive for New Zealand but no respondents indicated that they have, or plan to, shift their export strategy or market focus as a consequence of any of the agreements. This lack of response includes existing exporters to markets covered by one of the agreements.

These verdicts are important although they are not necessarily based on a full understanding of the agreements. For example, of the 20 respondents aware that FTAs had been signed fewer than half were able to identify Brunei and Chile as partners in one of the agreements. The most widely recognized agreement is that with Singapore but this appears to reflect the number of exporters targeting this market rather than efforts to research this particular agreement. In practice, the FTA with Singapore has had a marginal impact on trade, not least because Singapore was already a very open market for New Zealand traders. Overall, few exporters indicated that they had made any particular effort to inform themselves of the FTAs and in the absence of such investigation it was assumed that their impact is limited to changes in tariff protection. As well, it should be recognized that agreements include provisions that may be phased in over time. As a consequence the FTAs may ultimately become more important and SMEs may gain new business opportunities through the expansion of exporting and international investment by large enterprises. On the other hand, the observations are consistent with other studies showing that FTAs have little direct impact on SMEs (Julien et al. 1994; Campbell 1996) and may be more significant in being based on the reactions of existing exporters rather than SMEs in general.

Reflecting the perception that trade agreements are mainly important for reducing tariff barriers, one rationalization for not responding is involvement in activity that is not affected by tariffs. This may be because the SME delivers services in the overseas market, exports to markets without tariffs on their export item or exports direct to individual consumers. Other exporters may export goods on which tariffs are imposed but because they supply on a free-on-board basis the incidence of the tariff is considered to fall on the importer and their customers. Four respondents did acknowledge that their sales are constrained by tariffs but as long as any tariff persisted a negative impact was perceived to exist. As one wine exporter expressed their judgment:

Looking at Thailand it [the trade agreement] was in the end a reduction in the tariff on the wine, but it wasn't really helpful. Well it didn't hurt you know, but if there is a tariff of 420 nowadays 400 it is still a lot of tariff (Firm 50).

Reinforcing the lack of excitement generated by the trade agreements, exporters are inclined to believe that non-tariff related barriers are a larger impediment than tariff

related barriers. The non-tariff related barriers emphasized are generally thought to be outside the purview of trade agreements such as documentation requirements, unfamiliar business practices and (bio-) security regulations (Table 5). For those enterprises that have overseas registered businesses to support their activity, the major issue was frequently the taxation treatment in New Zealand of income repatriated from overseas where it had already been taxed. The volatility of the New Zealand dollar and the associated problem of receiving support (including credit) from banks were other issues outside of trade agreements that are sometimes of greater concern to SME traders.

Table 5: Non Tariff Issues Perceived by Respondents

Natural health product exporter (Firm 52).

Our biggest barrier to exporting is different regulations around the world, it's not the tariffs or the import duties, it's the actual legislation... I have a look at that country first, but then the regulation would then be the determining factor, the regulation

Designer and manufacturer of machinery for educational purposes (Firm 2).

Doing business in Muslim countries is an art form, you have to be very careful what you say, what you do and how you say it. We are slowly learning how to deal with Muslim countries... the hardest job is identifying who is at the top and who is not at the top... and that takes some doing.

Drilling contractor (Firm 40).

One of the biggest problems we're coming up against in the last 12 months is the new worldwide bio-security law to move equipment around. That is ... one of the most major problems for exporting for us.

Health product manufacturer (Firm 39).

The post 9/11 fallout with security has had a big effect as well, just on the sheer difficulty of moving product into the United States from a security perspective.

The unwillingness of exporters to perceive significant opportunity arising from the trade agreements can also be understood in relation to the lack of fit with the marketing strategies pursued by SMEs (Table 6). By its nature the sales driven strategy is largely unconcerned with attracting customers in any particular market being largely an opportunistic approach to exporting. Any impact from a trade agreement would, therefore, depend on buyers perceiving additional reason to contact a New Zealand supplier. The relationship driven strategy is built around particular customers supported by dedicated investments that are justified partly from the perceived long term future of the relationship. Trade agreements may facilitate the discovery of opportunities in alternative locations but the incentive to do this is reduced by their investment in existing relationships. International boutique strategists have not reacted to the trade agreements as they target non price sensitive market niches and perceive little opportunity for extending sales in individual markets. Simplified trade regulations and harmonization of labeling and product quality regulations may assist but exporters tend to be insulated from market compliance issues by their use of local market distributors. The arbitrager has the possibility of shifting their exporting to encompass markets affected by a trade agreement and generally seek to increase their marketing opportunities. In this way trade agreements that open up or improve access to markets may be utilized but this will be determined as sales opportunities open and close across their network of potential buyers.

Table 6: Marketing Strategies and Trade Agreements

Marketing strategy	Impact of trade agreement
Sales driven	None – low: lack of focus on where sales are made is a defining characteristic of this strategy.
Relationship driven	Low: exports rely on committed links to selected overseas buyers; exporting is based around ties to individual buyers; in the long term national market features affected by trade agreements may influence new targets.
International boutique	Low: boutique exporters target non price sensitive market niches across multiple countries.
Arbitrager	Medium: arbitrager exporters are potentially interested in additional market access improvement to diversify their sales options.
Market seeder	Medium: the long term target of licensing local users is not affected; additional interim marketing opportunities may be facilitated but this impact is minor where the technology can be applied to markets outside of trade regulations (military, civil defense).

The market seeding strategy is directed to the ultimate goal of replacing exports by the licensing of local producers. Should the target be reached, trade agreements would be of minor or low significance in changing the opportunity to conclude licensing arrangements except in so far bi-lateral intellectual property protection is strengthened or the FTA includes specific provisions that assist licensing procedures. In the interim, trade agreements may assist access to some markets, although the significance of this is reduced where options have existed to ‘seed’ markets outside of trade controls such as military and civil defense buyers.

Implications for Trade Negotiators

There is a need for further research to understand how trade agreements might fit more closely with SME export strategies. The present study does not give insight into the relative frequency of alternative strategies, their financial importance or enduring sustainability. In this regard trade negotiations could be beneficially informed by a more comprehensive study of SME export behavior although it may be significant that the present study agrees with Merrilees and Tiessen (1999) in suggesting that some form of relationship strategy is most widely followed. This strategy tends to rely more than others on investment in the export market and this raises the importance of protection for overseas investment, provisions for which are usually part of a FTA. The taxation treatment of overseas-earned income returned to New Zealand is also an important consideration for SMEs pursuing a relationship-strategy but this issue can be addressed through Double Taxation Agreements rather than FTAs. This may be one way that an FTA could assist focused activity undertaken by SMEs.

The regional priorities identified by exporters for future trade agreements offer another indicator to trade negotiators. Generally there is much greater interest in agreements with older, high income economies like the US and the EU than the developing and newly industrialized economies, although South America and the Gulf states are among the regions of interest. These preferences cover existing and potential markets for the export offerings of the SMEs covered in the study because of their relatively high incomes and industrial activity. Given a trade off between

securing small concessions with a high income economy or large concessions from a middle to low income economy, the respondents favor the former.

A further general message from our sample of exporters is that concern exists more about the effort to comply with trade rules than the existence of trade rules themselves. The nature of SME exports is that they tend to be specialized and non standard and this raises a number of issues. Trade rules are frequently tied to specific and often 'generic' categories of goods and services and this requires exporters and trade authorities to agree over the classification made. These problems are minimized where commodities or finished consumer goods are involved but can present difficulties for partly processed, unfamiliar or niche items. Another issue arises where authorities in an importing country seek government endorsements based on their own country's administrative systems that do not match responsibilities in New Zealand. For example, in some countries local governments have jurisdiction in certifying the status of individual enterprises. This creates a problem when it leads to requests for exporters to obtain similar endorsement as in New Zealand local government has no equivalent jurisdiction. There are also concerns about the consistency in the application of trade rules both in the treatment of their exports and in ensuring that rules are applied equally across exporters. These experiences suggest that trade authorities need to balance the investment in the negotiation of the agreement with the monitoring of its implementation and exporters' practical experiences and actions to reduce the impediments they bring. It also points to the importance of ensuring that trade agreement provisions are not susceptible to differences of interpretation.

Another finding from the survey is the need to raise the profile of the FTAs under negotiation to ensure there is greater understanding of the issues that an FTA can address. More directly, stakeholder engagement could be focused on explaining particular opportunities which negotiators might pursue for SMEs. An example revealed by the survey relates to licensing procedures which could be regulated through the services or investment chapters of the FTA. This would be one practical matter which an FTA could address but currently does not because of the low level of understanding of what it is FTAs can do for exporters, including SMEs.

Conclusion

Internationalization is important to the success of small economies as indicated by their high levels of openness to international trade. The emphasis on exporting is particularly significant in New Zealand, where the small size of the domestic market makes exporting a critical requirement for growth. Government efforts to promote economic transformation similarly emphasize trade and this has led to the establishment of a multi-level approach, which includes the establishment of trade agreements with a range of other countries. These agreements are designed to make international trade easier and more efficient. Over recent years they have become an important part of New Zealand's international trade policy. To explain the reaction of SMEs to these agreements, this study has drawn on one previous attempt to outline theoretical models of SME export marketing (Merrilees and Tiessen 1999). As well as the existing sales driven and relationship driven models of international marketing, three new models have been proposed: international boutique, arbitrager and market seeder. These strategies have been distinguished by their different types of relationship with buyers and extent to which efforts are made to customize the export offering and associated marketing. These five models distinguish the sample of exporters in this study and it requires further studies of larger populations of SME

exporters to determine the universality of the export models. Nonetheless, it is encouraging that the study has confirmed the existence of the two previously suggested models among a different sample of SME exporters to those on which the models originated. As well, the association of the models with contingent conditions provides a rationalization for the strategies as something more than idiosyncratic business methods.

This paper has indicated that SMEs are frequently unable to incorporate the opportunities presented by trade agreements into their export practice. The reasons for this are related to the very nature of SMEs. To engage in international trade SMEs need to invest a significant amount of time and resources when at the same time they face financial and human resource constraints. Typically, the main decision maker in an SME combines technical, business and export knowledge and expertise, and they are the most important drivers in the export development process. Some of these individuals may have a formal export strategy, but others develop their export business as opportunities arise. Although this reactive approach to opportunities is often criticized, it works well for small firms which are resource constrained, but flexible and able to respond promptly to opportunities.

The small firms we encountered have a variable dependency on exports. Even among those with a high dependency the general situation is that small enterprises are satisfied by small markets. This tends to mean that it is much more uncommon for small enterprises to be constrained by market access than are high volume exporters. An extension of this is that rather than deepening relationships with current markets, many small enterprises are highly mobile in their exporting activity. For example, one exporter we encountered said that they had a network of around 50 overseas buyers interested in their product. In any year they may have capacity to supply no more than 10 of these buyers. This kind of operating environment means that enterprises can have the capacity to move product wherever the best opportunities lie rather than being reliant on changes in market access. Comparatively small volumes can also mean the possibility of serving specific market niches that give access to markets that might be blocked to high volume exporters. With limited production capacity, small enterprises are deterred from entering markets where they are unlikely to be able to satisfy customer demand. Similarly, they tend to tailor exporting to markets with the least investment required to access to customers. Both these influences explain why many of the exporters we encountered rely heavily on East Asia's small economies for exports. These are all relatively open economies so that even where a FTA has been concluded this may not have been recognized by exporters, or may have had a marginal (or nil) impact on exporters.

It is also important to recognize that exporting involves varying levels of interaction with overseas markets. At the extremes, for example, an internet trader may typically sell directly to end buyers who purchase in small parcel-size volumes. Exporting can simply mean mailing to an overseas address rather than a domestic one with the 'exporter' having little or no familiarity with the destinations to which their goods are dispatched. Distribution through normal or courier delivery systems can mean that exports generally slip under the radar screen of overseas customs and other regulatory authorities. One step removed from this are the many exporters who work through overseas agents who take all the responsibility and associated costs for clearing goods in the overseas market. Exporters can operate with little awareness of market access issues or other peculiarities of individual markets. Rather the focus may simply be on gaining the support of overseas distributors wherever they are located. Consequently while it might be thought that exporters are highly knowledgeable about market

access issues and are actively pursuing guidance and market information, this is not necessarily a requirement for all exporters. Many of the exporters encountered in this study fall within this category.

For those exporters who do engage with buyers in their export markets, it is important to distinguish 'market specialists' from those with variable markets. The market specialist dedicated to serving a particular market has scope to adjust investment to the needs and opportunities arising in the overseas market. The exporter that sells to markets that differ from one year to the next has less scope to learn about and adapt to market impediments. This type of exporter, depending on the markets of interest and type of product or service sold, has more chance of being concerned about market barriers and free trade negotiations than the specialist exporter. Indeed it is hard to imagine a specialist without them having resolved a method for effectively dealing with their market of interest. We interviewed relatively few enterprises that have a shifting market focus and this again needs to be recognized in the profile of responses obtained.

Finally, this article has identified a set of key implications for future FTA negotiations. These include the need to raise the profile of FTAs, how they can assist SMEs beyond simple tariff reductions. Raising SME awareness that FTAs can help safeguard investment in intellectual property, facilitate services trade (including through the internet), and so on., may all support the evolution of FTAs in a way that assists in facilitating export growth by SMEs with positive implications for the wider economy.

References

- Ayal, I. and J. Zif (1978) 'Competitive Market Choice Strategies in Multinational Marketing', *Columbia Journal of World Business* 13(3): 72-81.
- Brouthers, L. and G. Nakos (2005) 'The role of systematic international market selection on small firms' export performance', *Journal of Small Business Management* 43(4): 363-381.
- Buckley, P. and M. Casson (1985) *The Economic Theory of Multinational Enterprise*. New York: St Martin's Press.
- Campbell, A. (1996) 'The Effects of Internal Firm Barriers on the Export Behavior of Small Firms in a Free Trade Environment', *Journal of Small Business Management* 34(1): 50-58.
- Cavusgil, S. (1984) 'Differences Among Exporting Firms Based on their Degree of Internationalization', *Journal of Business Research* 12: 195-208.
- Cavusgil, S. and S. Zhou (1994) 'Marketing Strategy-Performance Relationship: An Investigation of the Empirical Link in Export Market Ventures', *Journal of Marketing*, 58(1): 1-21.
- Dunning, J. (1988) *Explaining International Production*. London: Unwin Hyman.
- Dicken, P. (2000) *Global Shift*. London: Paul Chapman.
- Faiola, A. and L. Laksmi (2008) 'Trade Talks Crumble in Feud Over Farm Aid' *Washington Post*, Wednesday, July 30, 2008: A01 (consulted January, 2009): <http://www.washingtonpost.com/wp-dyn/content/article/2008/07/29/AR2008072900556.html>
- Harris, G. (1996) 'International Advertising: Development and Implementation Issues', *Journal of Marketing Management* 12: 551-560.
- Hutchinson, K., B. Quinn and N. Alexander (2005) 'The Internationalization of Small to Medium-sized Retail Companies: Towards a Conceptual Framework', *Journal of Marketing Management* 21: 149-179.
- Jain, S. C. (1989) 'Standardization of International Marketing Strategy: Some Research Hypotheses', *Journal of Marketing* 53(1): 70-79.
- Julien, P., A. Joyal and L. Deshaies (1994) 'SMEs and International Competition: Free Trade Agreement or Globalization?', *Journal of Small Business Management* 32(2): 65-64.
- Katz, R. (1970) *Cases and Concepts in Corporate Strategy*. Englewood Cliffs, NJ: Prentice Hall.
- Katsikeas, C. and R. Morgan (1994) 'Differences in Perception of Exporting Problems Based Upon Firm Size and Export Market Experience', *European Journal of Marketing* 28(5): 17-35.
- Lee, C. and Y. Yang, (1990) 'Impact of Export Market Expansion Strategy on Export Performance', *International Marketing Review* 7(4): 41-51.
- Leonidou, L. (2004) 'An Analysis of the Export Barriers Hindering Small Business Export Development', *Journal of Small Business Management* 42(3): 279-302.
- Leonidou, L. and C. Katsikeas (1996) 'The Export Development Process: An Integrative Review of Empirical Models', *Journal of Business Studies* 27(3): 517-551.
- MacPherson, A. (2004) 'Export Characteristics of Canadian Firms in the Commercial Geographic Information Systems (GIS) Industry', *The International Trade Journal* 18(2): 101-125.
- Maskell, P., H. Eskelin, I. Hannibalsson, A. Malmberg and E. Vatne (1998) *Competitiveness Localised Learning and Regional Development*. London: Routledge.

- Merrilees, B. and J. Tiessen (1999) 'Building Generalizable SME International Marketing Models Using Case Studies', *International Marketing Review* 16(4/5): 326-344.
- Ministry of Economic Development (2007) *SMEs in New Zealand. Structure and Dynamics*. Wellington: Ministry of Economic Development.
- Ministry of Foreign Affairs and Trade (2007) *A Basic Guide to Free Trade Agreements. Ten Questions and Answers About Free Trade Agreements*. Wellington: Ministry of Foreign Affairs and Trade.
- Ministry of Foreign Affairs and Trade (2008) *ASEAN, Australia and New Zealand Free Trade Agreement* (consulted December, 2008): <http://www.mfat.govt.nz/Trade-and-Economic-Relations/Trade-Agreements/Asean/index.php/>
- Ministry of Foreign Affairs and Trade (2009) *ASEAN-Australia-New Zealand-Free Trade Agreement*. Wellington: Ministry of Foreign Affairs and Trade. (consulted March, 2009): <http://www.asean.fta.govt.nz/>
- Patton, M. (1990) *Qualitative Evaluation and Research Methods*. Beverly Hills, CA: Sage.
- Perry, M. (2001) *Shared Trust in New Zealand*. Wellington: Institute of Policy Studies, Victoria University of Wellington.
- Piercy, N. (1981) 'British Export Market Selection and Pricing', *Industrial Marketing Management* 10(4): 287-297.
- Porter, M. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. New York: Free Press.
- O'Gorman, C. (2000) 'Strategy and the Small Firm', in S. Carter and D. Jones-Evans (eds) *Enterprise and Small Business: Principles, Practice and Policy*, pp.283-299. Harlow: Prentice Hall, FT Pearson.
- Scherer, F. and D. Ross (1990) *Industrial Market Structure and Economic Performance 3rd edition*. Boston: Houghton Muffing.
- Statistics New Zealand (2005) *New Zealand in the OECD*. Auckland: Statistics New Zealand.
- Suarez-Ortega, S. (2003) 'Export Barriers. Insights from Small and Medium Sized Firms', *International Small Business Journal* 21(4): 403-419.
- Walters, P. (1997) 'Global Market Segmentation: Methodologies and Challenges', *Journal of Marketing Management* 13: 165-177.

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The Dynamism of Strategic Cooperation: Lessons from Successful European Knowledge Intensive e-Businesses

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Abstract

Recent advances in Information and Communication Technologies (ICTs) and the advent of the Internet have facilitated the growth of collaborative strategies amongst small e-Businesses (Matlay and Westhead, 2005). In addition, during the last decade, team-led entrepreneurship has been identified as a highly profitable alternative to single founder entrepreneurship. Research suggests that growth oriented, small e-Businesses operating in international e-Markets are more likely to be founded and managed by *teams* of e-Entrepreneurs (Matlay and Westhead, 2007). In increasingly globalised and hyper-competitive markets, ‘virtual teams’ of e-Entrepreneurs search, discover and exploit new entrepreneurial opportunities. This type of entrepreneurial team consists of geographically dispersed entrepreneurs who are led by common entrepreneurial interests and interact electronically in order to promote interdependent strategies and fulfil entrepreneurial goals. Illustrative case studies are used to compare and contrast emergent collaborative and competitive strategies in small e-Businesses that are lead and managed by e-Entrepreneurs who are members of a pan-European virtual team. Collaborative and competitive strategies of e-Businesses are identified and related outcomes are analysed. A future research agenda is suggested and pertinent policy recommendations are offered.

Keywords: e-Business, Collaboration, Competition, Virtual Teams, e-Entrepreneurs, Culinary Tourism, Europe.

Introduction

Until recently, 'traditional' organisational forms, which emerged during the Industrial Revolution, have dominated the economies of both developed and developing nations (Volberda, 1996). In industrially developed countries, traditional organisational forms encompass a wide variety of sizes, locations and economic activities including small and medium-sized enterprises (SMEs). Notably, however, much of the ensuing economic, policy and research interest during the 20th Century focused mainly upon the activities and contribution of large organisations and multinational corporations (Gerschenkron, 1962; Heblich, 2007). As a result, the needs and performance of SMEs were largely neglected (Best, 1990; Hamel and Prahalad, 1994). The industrial restructuring and large firm downscaling that took place during the 1970s and 1980s generated large scale youth and adult unemployment over a relatively short timescale. The ensuing socio-economic upheaval resulted in a radical shift in national policy and research perspectives as well as the inclusion of smaller firms in their remit (Sabel, 1989; Carlsson, 1994). It is now widely accepted that SMEs make a significant contribution to the economy in terms of employment, productivity and competitiveness (Carree and Thurik, 1998; Carree and Thurik, 1999) and that a healthy and growing small business sector is crucial to the socio-economic and political infrastructure of a nation.

During the 1990s, the dominance of traditional organisational forms has been challenged by the emergence of the Internet and related developments in Information Technology (IT) in general and Information and Communication Technologies (ICTs) in particular. Individually and cumulatively, these developments have facilitated the evolution of new and innovative organisational forms (Matlay and Westhead, 2005). Initially, large organisations adopted 'e-Commerce' as a complementary and efficient strategy to increase their market share (Pinker *at al.*, 2002). For a while, specialist research in this area remained focused on e-Commerce and related activities in large organisations. Following the 'Dot-Com meltdown' of 2001, micro- and small 'e-Businesses' have emerged as important players in hypercompetitive and highly profitable 'e-Markets' (Matlay and Addis, 2003). The drive for sustainable competitive advantage represents an important strategic component of SMEs operating in an increasingly globalised European market (Barnes and Hunt, 2001). In terms of internationalisation strategies, those SMEs that have achieved successful expansion beyond their domestic markets are increasingly dependent on collaborative strategies that offer significant competitive synergies beyond their organisations' scope and scale (Matlay and Westhead, 2007).

There exists a growing body of specialist knowledge devoted to various aspects of small e-Businesses and their activities. Nevertheless, much of the current research and theory formation in this field remains dedicated to traditional economic forms, including their contribution and sustainability (Matlay, 2008). There is a marked paucity of research focusing specifically on e-Entrepreneurs in general and virtual teams of e-Entrepreneurs in particular. In this article we focus upon the collaborative and competitive strategies of small e-Businesses in Europe. In doing so, we first identify the definition and nature of E-Business in terms of the types of small e-Businesses developing in Europe. This then leads onto a reviewed of European contexts in e-Business and to e-Collaboration as a competitive strategy. Although internationalisation is naturally part of the process, the wider literature on internationalisation in small firms is not considered here, as the focus is on virtual team formation, development and operation across time and space, and the strategies embedded in this process.

We base our analysis upon 24 illustrative case studies of small e-Businesses that are lead and managed by e-Entrepreneurs who are members of a pan-European virtual team. The case studies were selected from a large database of small independent businesses operating in the European tourism industry. Collaborative and competitive strategies of e-Businesses are identified and related outcomes are analysed. A future research agenda is suggested and pertinent policy recommendations are offered.

E-Business: Definitions, Conceptual and Contextual Considerations

In recent years, e-Business has emerged as a strategic way to improve communication (via Intranets) within organisations as well as enhance collaboration (via Extranets) with key external stakeholders, such as customers, suppliers and government representatives (Byrd, 2001; Basu and Kumar, 2002; Meroño-Cerdan *et al.*, 2006). Importantly, however, the adoption of e-Business was perceived as a way to achieve sustainable competitive advantage in an increasingly globalised economy (Martin and Matlay, 2001; Martin and Matlay, 2003; Li *et al.*, 2004). There is considerable confusion of terms relating to doing business over the Internet (Melao, 2009). This is symptomatic of media coverage as well as academic and practitioner publications. Some authors use terms such as ‘e-Business’, ‘e-Commerce’ and ‘Internet Trading’ interchangeably while others tend to differentiate between specific aspect relating to each of these terms (Papazoglou and Ribbers, 2006; Laudon, and Traver, 2008).

Zwass (1996:3) pioneered a comprehensive e-Business definition, which incorporated “...the sharing of business information, maintaining business relationships and conducting business transaction by means of telecommunication networks”. Although this early definition underlies much of the early research in e-Business, it has not become standardised or been universally accepted. Bandyo (2002) points out that the concept of e-Business and e-Commerce were first mentioned in academic literature during the late 1980s in order to differentiate between traditional, paper based transactions and electronically conducted exchanges. In this context, Lucas (1996) argues that even the most basic e-Business models must rely exclusively on electronic transactions as opposed to traditional paper based exchanges. Timmers (2000) posits that a ‘true’ e-Business should encompass the whole array of electronic trading steps, such as online marketing, ordering and remittance facilities as well as complaints, returns and after sale support. For the purpose of this research study the authors have adopted Stephen Chen’s (2001:2) wider definition of e-Business which includes buying and selling on the internet as well as supporting/servicing customers and collaborating with various business partners.

In his overview of e-Business models, Matlay (2004) offers five basic types of electronic transactions:

1. *Business-to-Business (B2B)* - which involves the marketing and sales of products/services between businesses.
2. *Business-to-Customer (B2C)* - where businesses target products/services directly and exclusively at private customers.
3. *Business-to-Government (B2G)* - entails businesses delivering electronically a range of products/services to Government or government sponsored institutions

4. *Business-to-Portal (B2P)* - involves the marketing of products/services on an Internet based portal
5. *Business-to-Affiliate (B2A)* - includes the marketing of an affiliate's products/services on a commercial website

It should be noted, however, that in addition to these basic types of electronic transactions, there are a number of e-Business permutations and hybrid organisational forms that operate at various levels of Internet trading adoption, some not completing the e-Business adoption process and excluded from this category (see Martin and Matlay, 2003; Matlay and Addis, 2003). Importantly, however, these hybrid organisations carry out some aspects of their transactions over telecommunication networks. As such they do not conform to either the traditional paper based organisational form or the exclusively electronic transactions of the 'true' e-Business model. Nevertheless, they seem to operate successfully in almost every sector of the economies of both industrially developed and developing nations (Matlay, 2004).

E-Business: A European Perspective

The next section reviews European contexts given the pan-European nature of the members of the case study. In their seminal book, published to coincide with the 50th anniversary of the European Union (EU), Tilly *et al.*, (2007) provide a comprehensive overview of contemporary European socio-economic and political development since the end of the Second World War in 1945. They chart both the enlargement of EU membership from 6 founding members in 1957 to 27 in 2007 and the economic challenges faced by European countries in relation to competition, innovation, globalisation and structural changes within the continent itself as well as vis-à-vis other industrially developed and developing nations.

In terms of future economic development, the authors highlight that "... the Lisbon agenda of the EU which aims at making the EU the most competitive economy by 2010 has emphasized the goals of higher employment and higher growth in the Community, by placing emphasis on the role of information and communication technology [ICT] in a knowledge society" (Tilly *et al.*, 2007:3). This highlights the important role that ICT investment, innovation and e-Business adoption is playing in European structural adjustment at both macro- and micro-economic levels.

It is widely acknowledged, however, that ICT, innovation and e-Business adoption patterns vary considerably across EU countries (Welfens, 2007). Furthermore, ICT usage, innovation investment and e-Business adoption rates in Europe have not contributed to productivity improvements and economic growth at the high levels experienced in the US and elsewhere (McGuckin and Van Ark, 2005; Pols, 2007). Various solutions have been suggested to narrow the growing productivity gap between European countries and their international competitors (Van Ark, 2006; Inklaar *et al.*, 2005). At macro-economic level, there is a need for European countries to implement complementary structural policies, including labour market and educational reforms (Beugelsdijk and Eijffinger, 2003; Sapir, 2006; Artis and Nixon, 2007). At micro-economic level, most observers recommend an increase in ICT investment and the acceleration of e-Business adoption, in particular within the SME sector, which accounts for just over 99% of all economically active units in Europe (Peet *et al.*, 2002; Davis, 2003; Erumban and De Jong, 2006).

The drive for sustainable competitive advantage represents an important strategic component of SMEs operating in a largely globalised European market (Matlay and Westhead, 2005). In terms of internationalisation strategies, those SMEs that have achieved successful growth beyond their domestic markets have become increasingly dependent on a variety of collaborative strategies and approaches. Some collaborative partnerships, including ‘virtual teams’ of e-Entrepreneurs, offer significant competitive synergies that exceed their individual organisational scope and scale as well as technical, financial and human resource support (Matlay and Westhead, 2007). Importantly, however, recent research on value creation in e-Business adoption positioned European firms at a disadvantage as compared with those operating in the US (Amit and Zott, 2001; Schubert and Leimstoll, 2008). Similarly, the productivity gap between European e-Businesses and their counterparts in the US continues to widen despite growing investment in, and support for, ICT innovation in EU member countries (Peet *et al.*, 2002; Pols, 2007). Innovative organisational forms and related collaborative links amongst European businesses could offer a solution to both these problems and contribute significantly to national and regional development (Hamdouch, 2008).

E-Collaboration as a Competitive Strategy

According to Waesche (2003) the uneven development of internet entrepreneurship in some parts of Europe has been attributed to the absence of regional ‘entrepreneurial ecosystems’ that facilitate cooperation amongst entrepreneurs, venture capitalists, legal experts and other specialist support providers. In contrast, US enterprises appear to have benefited significantly from entrepreneurial ecosystems, such as those operating in the Silicon Valley region. In addition, collaborative links with academic, research and financial networks ensured rapid response and focused support for innovation opportunities that were identified and converted by enterprises operating within loosely defined entrepreneurial ecosystems (Kenney, 2003).

Typically, entrepreneurial teams provide support to, and benefit from, collaborative networks of geographically dispersed SMEs that share common goals (Matlay and Westhead, 2005). In this context, Hamdouch *et al.*, (2008:3) argue that “...innovation, notably technological (but also organizational and commercial) is now recognized as a collective process, and not just as a physical and social phenomenon stemming from the genius of an inquiring and ingenious mind”. In his review of successful innovation in European SMEs, Cobbenhagen (2000:34) compares and contrasts the needs and contribution of small and large firms and concludes that “...most of the growth in employment and added value can be attributed to SMEs ... and innovation is as important to them as to large firms”. Successful innovation that takes place in resource challenged SMEs can be facilitated and supported by a collective process of collaboration and learning that offsets the size-related scope and scale advantages of larger firms (see Matlay, 1998; Cumbers *et al.*, 2003). The innovative capacity of SMEs to adapt and react to rapidly changing market conditions has is recognised as their most important competitive advantage (Schubert and Leimstoll, 2008).

As an emergent organisational form, ‘virtual teams’ of e-Entrepreneurs illustrate the adaptive capacities of small e-Businesses to respond to the opportunities and challenges associated with the rapidly expanding global e-Economy (Matlay and

Westhead, 2005; 2007). These consist of geographically distributed entrepreneurs who interact through interdependent tasks and are led by common entrepreneurial interests and goals (Matlay, 2003a). The majority, if not all, of their interactions take place outside traditional face-to-face meetings, and are conducted via email, instant messaging, video- and mobile conferencing as well as other Internet-based interactive technologies (Matlay, 2003b).

Despite the growing importance of e-Businesses in Europe and the recent policy focus on e-Entrepreneurship, many of the conceptual and contextual aspects of virtual teams of e-Entrepreneurs are yet to be comprehensively researched. In this article we focus upon the collaborative and competitive strategies of 24 small e-Businesses in an illustrative virtual team in order to better understand both the advantages and disadvantages accruing to owner/managers and their employees.

Research Methodology

Research approach: sector, method and rationale

Tourism remains one of the fastest growing sectors in both developed and developing economies and is expected to continue to expand despite the unfavourable economic conditions affecting countries in the European region as well as other popular destinations across the world (WTO, 2007). Over the last two decades, research has struggled to keep up with ongoing development in the rapidly evolving tourism sector of the European economy. Furthermore, such research that exists, often suffers from a number of inherent shortcomings, which renders a large proportion of emergent results problematic in terms of generalisation across time and space (Matlay, 2003a).

In order to overcome methodological issues, some authors choose either quantitative or qualitative approaches, while others adopt a 'pragmatic' mix of research methods (Pansiri, 2005; 2006). Neither quantitative nor qualitative methods are deemed sufficient to ensure empirically rigorous results that hold across a wide variety of relevant contexts (Walle, 1997). The use of triangulation methods has met with some success in ensuring partial generalisation of tourism research results (Decrop, 1999). Nevertheless, a lack of standardised definitions and ongoing methodological problems tend to localise research results and represent an effective barrier to cross border generalisation of results (see Matlay, 2005).

Traditionally, the formation and development of Virtual Teams of e-Entrepreneurs in the European tourism sector is based upon emergent innovations in ICTs (Matlay and Westhead, 2005). It has also been established that the fundamental strategic perspective underlying strategic development of this type of team relates narrowly to entrepreneurial opportunity in its three main stages, i.e., recognition, discovery and creation (*cf.* Sarasvathy *et al.*, 2003). Niche market orientation can also play an important role in the formation and membership characteristics of virtual teams of e-Entrepreneurs. Typically, however, it is the conversion of entrepreneurial opportunities into commercial outputs that sustains and determines the long term success or failure of this emergent organisational form (Matlay and Westhead, 2007). In developing the meta-analysis of these 24 cases, innovation and the 3 –stage process will therefore be key themes.

Research method

For the purpose of this research, a longitudinal, a cross border comparative case study approach was chosen in order to provide an empirically rigorous analysis of collaborative and competitive strategies in a sample of European tourism businesses. The choice was influenced by the authors' determination to use an 'integrative' research method that goes beyond presenting data on case examples. It is meant to facilitate a critically and empirically rigorous overview of the impact that collaboration has on competitive strategy within the dynamics of virtual team management. According to Beeton (2005), case studies have been used extensively in tourism research and this method has been applied consistently across a wide range of relevant contexts. There is, however, a marked paucity of longitudinal studies in tourism related topics (Ritchie, 2005). The longitudinal dimension of this research study adds conceptual and contextual consistency to the qualitative depth of analysis and covers a relatively long (1992 to 2008) time span.

The emergent results provide an empirical and comparative perspective on the various influences that have impacted upon European tourism e-Businesses and the changes that affected their competitive strategies. In total, 24 small e-Businesses from a virtual team of e-Entrepreneurs were selected as illustrative case studies from a larger research population of firms operating in the European culinary tourism sub sector (GIR, 2008). An overview and analysis of the emergent results are provided in the next section as a meta-analysis. The individual cases are therefore not reported separately since the aim of the paper is to identify and set forward insights specifically on strategy in the eBusiness process.

Data Analysis and Discussion

The 'Culinary Tourism' virtual team investigated in this study provides a rich and valuable context for a comparative case study analysis of the collaborative and competitive strategies of 24 e-Entrepreneurs and their e-Businesses. As an emergent organisational form it is illustrative of the many virtual teams that operate successfully in the European culinary tourism industry. The results were mapped and key aspects emerged discussed here as:

1. *Virtual Team Formation, Membership and Development*
2. *Virtual Team Collaborative and Competitive Strategies*
3. *Virtual Team and e-Marketing Platforms*

1. *Virtual Team Formation, Membership and Development*

The origins of the Culinary Tourism Virtual Team (CTVT) can be traced to an exploratory meeting that involved five entrepreneurs and took place in March 1992 during a trade exhibition in Paris. The five entrepreneurs, who were fluent in English, owned and operated tourism businesses located in the UK, France, Austria, Hungary and Poland. During the previous two years, these entrepreneurs had exchanged telephone calls and emails that related to queries and requests raised by some of their regular customers. Over time, it became obvious that a growing number of requests for specific destinations were interrelated and followed a well defined pattern, involving cross national and international destinations. Invariably, requests for

multiple international destinations referred to historical, cultural and culinary aspects of specific European countries.

As demand for overseas destinations increased rapidly, the five entrepreneurs continued cooperating with each other on a 'good will' basis, which proved mutually beneficial in terms of turnover and profit margins. In the autumn of 1991, the French entrepreneur suggested a meeting to coincide with a prestigious tourism exhibition and offered to facilitate the trip as well as provide accommodation and transport to and from the venue. Following intense discussions and negotiations, it was agreed at the Paris meeting to formalise a 'virtual team arrangement' between the five entrepreneurs. The virtual team aimed to focus exclusively on cooperation related to business referrals and knowledge exchanges in the rapidly expanding European culinary tourism. Preliminary strategies for the growth of their virtual team and related businesses were also proposed at this meeting and various suggestions discussed in detail.

Between 1993-2003, CTVT grew and developed considerably to incorporate a core membership of 24 e-Entrepreneurs, representing most European countries. Since 2000, CTVT has been operating as a highly profitable virtual team with a stable membership and a reputation for high quality culinary tourism destination and related services. Interestingly, from conception, the use of ICTs and, at a later stage, the adoption of electronic business (e-Business) and mobile business (m-Business) became an important and profitable inter-team business strategy. Although the French e-Entrepreneur acts as an informal 'lead entrepreneur', all important strategic decisions in CTVT are made in common and subject to a majority agreement of at least two-thirds of core entrepreneurs.

Core membership comprises those e-Entrepreneurs who both consider themselves, and are acknowledged by other team members, to be significantly and permanently involved in the commercial activities of this virtual team. They derive all or a major part of their turnover from the cooperative activities of CTVT. In addition to the core membership, there are between 10 and 15 e-Entrepreneurs that represent the peripheral membership of the virtual team. These peripheral members are only involved on a temporary or ad hoc basis and derive a relatively small proportion of their turnover from activities that are directly attributable to CTVT. Importantly, peripheral members are not called upon to vote or make strategic contribution to any aspect of virtual team management or development. Nevertheless, they make a contribution to the delivery of 'overspill' and 'unforeseen' destinations and related services.

2. Virtual Team Strategic Convergence and Competitive Strategies

Most virtual team formation can be attributed to actual or perceived competitive advantages relating to collaborative niche market strategies. Previous research by Matlay and Westhead (2005, 2007) established that there is no prescribed or standard approach to cooperative or competitive strategies in virtual teams of e-Entrepreneurs. Preliminary results emerging from the longitudinal in-depth investigation of the 24 e-Businesses that constitute the core membership of the CTVT have highlighted a consistent and distinct convergence in their respective competitive strategies. The main aspects of strategic convergence amongst e-Business in CTVT can be usefully summarised as follows:

- a. Rapid adoption of ICTs and related e-Business processes, leading to early scope and scale advantages in targeted niche e-Markets
- b. Customisation, across the virtual team core membership, of standardised accounting, financial, marketing and after sale functions, leading to considerable cost reduction and effective resource utilisation.
- c. Mutual support in important operational aspects, which include technical, financial and human resource management, leading to considerable reduction of operative costs and increase in *per capita* profits.
- d. Adoption and the development of common marketing platforms and strategies, leading to significant growths in annual turnover rates.
- e. Development of pricing review mechanisms that resulted in standardisation and stabilisation benefits across the virtual team.
- f. Niche market expansion and consolidation at domestic levels, which facilitated overall internationalisation efforts in all e-Businesses within the team.
- g. Adoption of an inter-team transparency and support policy based upon mutual trust and ‘win-win’ conflict resolution.

In both absolute and relative terms, the collaborative strategies adopted by the 24 e-Businesses in the CTVT resulted in considerable and measurable competitive benefits. In absolute terms, three factors - overall cost reduction, effective resource utilisation and increase in turnover - delivered significantly higher profit rates as well as above average entrepreneurial returns. In addition, operational support and niche market expansion provided business stability and enhanced these e-Entrepreneurs confidence in their collaborative strategies.

In relative terms, mutually supporting collaborative activities within the CTVT resulted in significant human resource gains at e-Business level as well as enhanced managerial, technical and marketing skills for the e-Entrepreneur. In an economic environment dominated by micro- and small tourism businesses, which are on average four times less likely than larger organisations to engaged in collaborative activities (see Lockett and Brown, 2006:380), the virtual team setting provided significant short- as well as long-term competitive benefits. Furthermore, it appears that each e-Business achieved and maintained sustainable competitive advantage by collaborating with members of the virtual team while competing successfully against firms of all sizes within the same niche market.

3. Virtual Team and e-Marketing Platforms

Traditional European small firms are usually associated with either manual, or at best, semi-automated business and transaction processes that are comparatively slow and inefficient. Most e-Business platforms follow ‘evolutionary’ development patterns that often lag behind the ‘state of the art’ ICTs employed by their fast-growth competitors that operated in rapidly evolving global e-Markets. The longitudinal analysis of CTVT confirmed that manual and semi-automated business processes only prevailed for a short period amongst the five founding businesses in. By the end of 1995, these businesses were fully automated and intensely geared towards evolving

ICTs that went beyond email exchanges between founding entrepreneurs and amongst their employees. Nevertheless, these businesses continued to rely upon ‘word-of-mouth and paper based marketing strategies that only partially addressed their collaborative efforts. One year later, successful full adoption of e-Business platforms, including Electronic Data Interchange (EDI) technologies enabled these e-Entrepreneurs to pursue ‘revolutionary’ development patterns that significantly enhanced collaboration within the virtual team, facilitated membership expansion and the development of a common platform for the internationalisation of culinary destinations and related services.

All the important items on the original agenda at the basis of CTVT formation have been successfully completed by 1997 and core members proceeded to consolidate their achievements. Over the next ten year (1998 – 2007) period, core members worked collaboratively to integrate and perfect their business-to-business (B2B) transactions into a common e-Supply Chain Management system. In addition, they decided to consolidate their domestic and international Business-to-Customer (B2C) transactions into a common e-Marketing system. Both of these strategies met with considerable success. Unfortunately, however, efforts to integrate these collaborative operative systems within relevant administrative and after sale functions were met with technical, cultural and language barriers as well as considerable staff resistance to radical change, common to many small firms (Martin, 2005). After experimenting with various models and electronic platforms, the core e-Entrepreneurs decided to abandon this strategy and continue to rely on firm specific administrative and after sale support systems.

The failure to achieve total ‘e-Integration’ in CTVT underlines both the advantages and limitations attributable to collaborative models of competitive strategy, including virtual teams (Frohlich, 2007). Most collaborative models of entrepreneurial activity share a degree of scope, scale and cost advantage, including those clusters, networks and joint ventures. Higher collaborative intensity and levels of trust as encountered in virtual teams can therefore be expected to offer greater than average scope, scale and cost advantages. In addition, these can also provide better risk management and flexibility of delivery (Ball and Queyranne, 2006). This is particularly relevant to CTVT, where high intensity collaborative and integrative strategies resulted in greater than average entrepreneurial return as well as higher levels of business trust and interaction amongst the core membership.

There are however, other determinant factors that impact upon collaborative entrepreneurial models and limit outcomes in general and cost advantages in particular (Wu and Kleindorfer, 2005). The direct cost advantage accruable is mostly determined by the level of operational planning, staffing, maintenance and after sale support. In the case of CTVT, expected direct and indirect cost advantages related to high levels of strategic planning, collaboration and integration were reduced by factors that were largely beyond the e-Entrepreneurs’ control. A deliberate strategy to maintain only one core representative in each European country, however, had a *de facto* limiting effect upon the domestic scale advantage but contributed an equivalent or greater increase in the international exposure of relevant destinations. On balance, however, the advantages accruable to core CTVT members were perceived to significantly exceed the potential of ‘solo’ entrepreneurs operating in the same niche market.

Concluding remarks

The results emerging from the longitudinal study and meta-analysis of the Culinary Tourism Virtual Team (CTVT) cases provide empirically rigorous insights into the way in which strategy underpins virtual team formation, development and operation across time and space. The CTVT was initially formed to promote and support cooperation between growth oriented e-Entrepreneurs operating in the rapidly expanding European culinary tourism sector. Since its inception in 1992, this virtual team has grown to incorporate 24 core e-Entrepreneurs and 15 peripheral members. In terms of e-Market growth and penetration, it is currently represented in most European countries. Collaborative strategies adopted by these e-Entrepreneurs have resulted in the rapid adoption of ICTs and e-Business processes, the standardisation of accounting, financial, marketing and after sale functions, continuous support in technical, financial and human resource management and the development of competitive e-Marketing platforms and strategies.

Members of CTVT have achieved early successes in niche market expansion and consolidation in domestic markets as well as overall internationalisation of their e-Businesses within the competitive European culinary tourism sector. Consistently higher *per capita* turnover and profit levels have been recorded in each of the e-Businesses in this virtual team. Higher profits are mostly the result of significant scope, scale and cost advantages that can be directly attributed to team wide collaborative strategies. Importantly, CTVT members claim that considerable advantages accrual to virtual team membership and that these far exceeded the growth potential of other entrepreneurs operating in this niche market.

More research is needed into the formation, development and business strategies adopted by e-Entrepreneurs who belong to virtual teams. Very little is known about financial and managerial issues, harvesting and exit strategies, family involvement and succession planning. There is a marked paucity of empirical studies on employment, reward, training and human resource development strategies adopted in virtual teams of e-Entrepreneurs. As this area of entrepreneurship falls outside 'mainstream' investigation, relevant research is restricted by a scarcity of dedicated resources.

We recommend that policy makers at national and European levels divert a proportion of designated research funding from 'traditional' entrepreneurship research to emergent organisational forms such as virtual businesses and teams of e-Entrepreneurs. This would facilitate a better understanding of e-Business formation and the development of e-Europe across the broad spectrum of those operating in eBusiness. It would also define and identify the role of collaborative and competitive Strategies in virtual teams of e-Entrepreneurs. By providing further pan-European perspectives it would also complement the US models often used to define these new forms of business – this might also be true for Australasia and other regions where virtual teams are emerging as a way to express entrepreneurship online to the significant benefit of the group of members.

References

Amit, R. and Zott, C., 2001, 'Value Creation in e-Business', *Strategic Management Journal*, 22, pp. 493-520

- Artis, M. and Nixon, F., (Eds.), 2007, *The Economics of the European Union: Policy and Analysis*, Fourth edition, Oxford: Oxford University Press
- Ball, M. and Queyranne, M., 2006, *Toward robust revenue management: Competitive analysis of online booking*, Research Paper No. RHS 06-021, University of Maryland, MD: Robert H. Smith School of Business
- Bandyo, N., 2002, *E-Commerce: Context, Concepts and Consequences*, Maidenhead: McGraw-Hill Education
- Barnes, S. and Hunt, B., 2001, *E-Commerce and V-Business: Business Models for Global Success*, Oxford: Butterworth-Heinemann
- Basu, A. and Kumar, A., 2002, 'Research Commentary: Workflow Management Issues in e-Business', *Information Systems Research*, 13, 1, pp. 1–14
- Beeton, S., 2005, 'The Case Study in Tourism Research: A Multi-Method case Study Approach', in Ritchie, B.W., Burns, P. and Palmer, C., (Eds.), *Tourism Research Methods – Integrating Theory with Practice*, Wallingford: CABI Publishing, pp. 37-48
- Best, M., 1990, *The New Competition: Institutions of Industrial Restructuring*, Boston, MA: Harvard University Press
- Beugelsdijk, M. and Eijffinger, S., 2003, *The Effectiveness of Structural Policy in the European Union: An Empirical Analysis for the EU-15 during the Period 1995-2001*, CEPR Discussion Paper No. 3879. London: Centre for Economic Policy Research
- Byrd, T., 2001, 'Information technology: core competencies, and sustained competitive advantage', *Information Resources Management Journal*, 14, 2, pp. 27-36
- Carlsson, B., 1994, 'The Rise of Small Business: Causes and Consequences', in Adams, W.J., (Ed.), *Singular Europe: Economy and Polity of the European Community After 1992*, Ann Arbor, MI: University of Michigan Press
- Carree, M. and Thurik, A.R., 1998, 'Small Firms and Economic Growth in Europe', *Atlantic Economic Journal*, 26, 1, pp.137–146
- Carree, M. and Thurik, A.R., 1999, 'Industrial Structure and Economic Growth', in Audretsch, D.B. and Thurik, A.R., (Eds.), *Innovation, Industry Evolution, and Employment*, Cambridge: Cambridge University Press
- Chen, S., 2001, *Strategic management of e-Business*, Chichester: John Wiley & Sons Ltd.
- Davis, P., 2003, 'Widening Participation and the European Union: direct action — indirect policy?', *European Journal of Education*, 38, 1, pp. 99-116

- Decrop, A., 1999, 'Triangulation in Qualitative Tourism Research', *Tourism Management*, 20, 1, pp. 157-161
- Cumbers, A., Mackinnon, D. and Chapman, K., 2003, 'Innovation, collaboration, and learning in regional clusters: a study of SMEs in the Aberdeen oil complex', *Environment and Planning A*, 35, 9, pp.1689-1706
- Erumban, A.A. and De Jong, S.B., 2006, 'Cross-country differences in ICT adoption: A consequence of Culture?', *Journal of World Business*, 41, 4, pp. 302-314
- Frohlich, M.T., 2007, 'e-Integration in the Supply Chain: Barriers and Performance', *Decision Sciences*, 33, 4, pp. 537 - 556
- Gerschenkron, A., 1962, *Economic Backwardness in Historical Perspective*, Cambridge: Harvard University Press
- GIR, 2008, *Virtual Teams of e-Entrepreneurs in Europe: A Longitudinal Perspective*, Coventry: Global Independent Research
- Hamdouch, A., 2008, Conceptualising *Innovation Clusters and Networks*, Paper presented at the Spirit of Innovation Forum, Tacoma-Seattle, Washington, USA, May
- Hamdouch, A., Laperche, B. and Munier, F., 2008, 'The collective innovation process and the need for dynamic coordination: general presentation', *Journal of Innovation Economics*, 2, 2, pp.3-13
- Hamel, G. and Prahalad, C.K., 1994, *Competing for the Future*, Boston, MA: Harvard University Press
- Heblich, S., 2007, *Self-Reliant Individuals and Pro-Active Companies*, Discussion Paper V-48-07, Passau: University of Passau
- Inklaar, R.C., O'Mahony, M. and Timmer, M.P., 2005, 'ICT and Europe's Productivity Performance; Industry-level Growth Account Comparisons with the United States', *Review of Income and Wealth*, 51, 4, pp. 505-536
- Kenney, M., 2003, 'The Growth and Development of the Internet in the United States' in Kogut, B., (Ed.), *The Global Internet Economy*, Cambridge, MA: The MIT Press, pp.69-108
- Kline, S.J. and Rosenberg, N., 1986, "Innovation: An Overview", in Landau, R. and Rosenberg, N., (Eds.), *The Positive Sum Strategy: Harnessing Technology for Economic Growth*, Washington DC: National Academic Press, pp. 275-307
- Laudon, K. and Traver, C., 2008, *E-Commerce: Business, Technology, Society*, 4th Edition, New Jersey: Prentice Hall
- Li, J., Mitra, J. and Matlay, H., 2004, 'E-Commerce and Management of Channel Conflict: Evidence from Small Manufacturing Firms in the UK', *International Journal of Technology Management*, 28, 7/8 pp.747-766

Lockett, N. and Brown, D.H., 2006, 'Aggregation and the Role of Trusted Third Parties in SME e-Business Engagement: A Regional Policy Issue', *International Small Business Journal*, 24, 4, pp. 379-404

Lucas, A., 1996, 'What in the World is Electronic Commerce?', *Sales and Marketing Management*, June, pp.24-29

McGuckin, R.H., and van Ark, B., 2005, *Productivity and Participation: An International Comparison*, Research Memorandum GD-78, Groningen: Groningen Growth and Development Centre

Martin, L.M. (2005), "Internet adoption and use in small firms: internal processes, organisational culture and the roles of the owner-manager and key staff", *New Technology, Work and Employment*, Vol. 20 No.3, pp.190-204.

Martin, L. and Matlay, H., 2001, Blanket Approaches to Promoting ICT in Small Firms: Some Lessons from the DTI Ladder Adoption Model in the UK', *Journal of Internet Research*, 1, 11, 5, pp.399-410

Martin, L. and Matlay, H., 2003, 'Innovative Use of the Internet in Established Small Firms: The Impact of Knowledge Management and Organisational Learning in Accessing New Opportunities', *Qualitative Market Research*, 6, 1, pp.18-26

Matlay, H., 1998, *Organisational Innovation, Knowledge Management and Team Learning in SMEs: A Resource Based Perspective*, Paper presented at the UCE Business School Research Seminar, Birmingham: University of Central England, June

Matlay, H., 2003a, 'Small Tourism Firms in e-Europe: Definitional, Conceptual and Contextual Considerations', in Thomas, R., (Ed.) *Small Firms in Tourism: International Perspectives*, Oxford: Pergamon, pp. 297-312

Matlay, H., 2003b, *e-Babel: In Search of a Theory of e-Everything*, Paper presented at the UCE Business School Research Seminar, Birmingham: University of Central England, March.

Matlay, H., 2004, Training and Human Resource Issues in Small e-Businesses: Towards a Research Agenda', *Education and Training*, 46, 8/9, pp.520-526

Matlay, H., 2005, *Beyond Innovation: Collaboration and Competition amongst Small e-Businesses in Europe*, Paper presented at the UCE Business School Research Seminar, Birmingham: University of Central England, February

Matlay, H., 2008, 'The Impact of Entrepreneurship Education on Entrepreneurial Outcomes', *Journal of Small Business and Enterprise Development*, 15, 2, pp.382-396

Matlay, H. and Addis, M., 2003, 'Adoption of ICT and e-Commerce in Small Businesses: an HEI-Based Consultancy Perspective', *Journal of Small Business and Enterprise Development*, 10, 3, pp.321-335

- Matlay, H. and Westhead, P., 2005 'Virtual Teams and the Rise of e-Entrepreneurship in Europe', *International Small Business Journal*, 12, 4, pp.279-300
- Matlay, H. and Westhead, P., 2007 'Innovation and Collaboration in Virtual Teams of e-Entrepreneurs', *International Journal of Entrepreneurship and Innovation*, 8, 1, pp. 29-36
- Melao, N., 2009, 'E-Business, E-Business Processes and E-Business Process Modelling: A Critical Examination and a Framework', *International Journal of Services Technology and Management*, Forthcoming
- Meroño-Cerdan, A., Lopez-Nicolas, C, and Soto-Acosta, P., 2006, *Analysing Collaboration Technologies Effect on Performance through Intranet Use Orientations*, Paper presented at the European and Mediterranean Conference on Information Systems (EMCIS), Costa Blanca, Alicante, Spain, July
- Negroponte, N., 1995, *Being Digital*, London: Hodder and Stoughton
- Papazoglou, M. and Ribbers, P., 2006, *E-Business: Organisational and Technical Foundations*, Chichester: John Wiley and Sons
- Pansiri, J., 2005, 'Pragmatism: A Methodological Approach to Researching Strategic Alliances in Tourism', *Tourism and Hospitality Planning & Development*, 2, 3, pp. 191 – 206
- Pansiri, J., 2006, 'Doing Tourism Research Using the Pragmatism Paradigm: An Empirical Example', *Tourism and Hospitality Planning & Development*, 3, 3, pp. 223 - 240
- Peet, S., Brindley, C. and Ritchie, B., 2002, 'The European Commission and SME Support Mechanisms for e-Business', *European Business Review*, 14, 5, pp. 335-341
- Pinker, E.J., Seidmann, A. and Foster, R.C., 2002, 'Strategies for Transitioning "Old Economy" Firms to e-Business', *Communications of the ACM*, 45, 5, pp.76-83
- Pols, A., 2007, 'The Role of Information and Communication Technology in Improving Productivity and Economic Growth in Europe: Empirical Evidence and an Industry View of policy Changes' in Tilly, R., Welfens, P.J. and Heise, M., (Eds.), 2007, *50 Years of EU Economic Dynamics – Integration, Financial Markets and Innovation*, Berlin: Springer, pp.183-202
- Porter M. E. (1990) *The Competitive Advantage of Nations*, New York: The Free Press
- Preissl, B. and Solimene, L., 2003, *The Dynamics of Clusters and Innovation*. Heidelberg and New York: Physica-Verlag

Ritchie, J.R., 2005, 'Longitudinal research Methods', in Ritchie, B.W., Burns, P. and Palmer, C., (Eds.), *Tourism Research Methods – Integrating Theory with Practice*, Wallingford: CABI Publishing, pp. 131-148

Sabel, C.F., 1989, 'Flexible specialisation and the re-emergence of regional economics', in Hirst, P. and Zeitlin, J., (Eds.), *Reversing Industrial Decline? Industrial Policy in Britain and Her Competitors*, Oxford: Berg Publishers

Sapir, A., 2006, 'Globalization and the Reform of European Social Models', *Journal of Common Market Studies*, 44, 2, pp.369-390

Sarasvathy, S., Dew, N., Velamuri, S. and Venkataraman, S., 2003, 'Three Views of Entrepreneurial Opportunity', in Acs, Z. and Audretsch, D., (Eds.) *Handbook of Entrepreneurship Research: An Interdisciplinary Survey and Introduction*. Dordrecht: Kluwer Academic

Schubert P. and Leimstoll, U., 2008, *How SMEs Strive to Achieve Competitive Advantage with IT-Supported Business Processes: An Empirical Study*, Paper presented at the 21st eConference on eCollaboration, Bled, Slovenia, June

Tilly, R., Welfens, P.J. and Heise, M., (Eds.), 2007, *50 Years of EU Economic Dynamics – Integration, Financial Markets and Innovation*, Berlin: Springer

Timmers, P., 2000, *Strategies and Models for Business-to-Business Trading Electronic Commerce*, Chichester: John Wiley and Sons

Van Ark, B., 2006, *Europe's Productivity Gap: Catching Up or Getting Stuck?*, Paper presented at the World Economic Performance: Past, Present and Future -Europe, the Americas and Africa workshop, Groningen: University of Groningen, October

Volberda, H.W., 1996, 'Towards the Flexible Form: How to Remain Vital in Hypercompetitive Environments', *Organisation Science*, 7, 4, pp. 359-374

Waesche, N.M., 2003, *Internet Entrepreneurship in Europe*, Cheltenham: Edward Elgar

Walle, A.H., 1997, 'Quantitative Versus Qualitative Tourism Research', *Annals of Tourism Research*, 24, 3, pp. 524-536

Waluszewski, A., 2004, 'A Competing or Co-operating Cluster or Seven Decades of Combinatory Resources? What's Behind a Prospering Biotech Valley?' *Scandinavian Journal of Management*, 20, 1, pp. 125-150

Welfens, P.J., 'Information and Communication Technology: Dynamics, Integration and Economic Stability' in Tilly, R., Welfens, P.J. and Heise, M., (Eds.), 2007, *50 Years of EU Economic Dynamics – Integration, Financial Markets and Innovation*, Berlin: Springer, pp.137-182

WTO, 2007, *Tourism Market Trends, 2007 Edition - World Overview*, Madrid: World Tourism Organization

Wu, D.J. and Kleindorfer, P.R., 2005, 'Competitive Options, Supply Contracting, and Electronic Markets', *Management Science*, 51, 3, pp. 452-466

Zwass, V. (1996) "Electronic Commerce: Structures and Issues", *International Journal of Electronic Commerce*, 1, 1, pp.3-23

Biotechnology Marketing Culture

by Päivi Eriksson and Heidi Rajamäki

This article explores biotechnology marketing from a cultural perspective. By culture we refer to a network of shared meanings, which allow actors collectively to make sense of what they and others do. We consider biotechnology marketing as a distinct culture that differs from other marketing cultures such as high tech marketing, services marketing and non-profit marketing. What is specific about biotechnology marketing compared to other marketing cultures is the effort to combine basic science and business.

Based on a data set including interviews, web materials and media texts, the article provides a description of biotechnology marketing culture in the context of the small Finnish biotechnology companies. Through the analysis of the recurrent themes in the data, we will show how they are expressed in various symbolic modes. Finally, we will show how the scientific symbolic mode is constructed as a natural frame for the commercial mode.

Introduction

This article is a case study of biotechnology marketing culture in the context of small Finnish biotechnology companies. For several decades, the concept of culture has been linked with business firms and industrial sectors and, therefore, its relevance and meaning has been widely discussed in organization theoretical literature (e.g. Turner 1971; Smirchic 1983; Martin 1992; 2001; Alvesson 2002). While research interests and theoretical perspectives to organization and corporate cultures vary extensively it can be argued that, currently, culture is one of the major issues in organization and business related literature. As a result, several authors have linked organization culture to marketing (e.g. Deshpande & Webster 1989; Webster 1990, 1992, 1993, 1995; Turner & Spencer 1997; Appiah-Adu, Fyall & Singh 2000). Using the distinction introduced by Smirchic (1983), the studies focusing on marketing from a cultural perspective seldom show an interest in culture as a root metaphor. Instead, they treat culture as a variable, which has an effect of marketing efficiency. This is not the main interest of our study. In this article, we take culture as a root metaphor, which refers to a network of shared

symbols and meanings (Smircich 1983). Accordingly, we approach biotechnology marketing culture as created and maintained through symbolic modes of action (such as language and discourse), which facilitate the production of shared meanings.

As far as we know, there are no studies exploring marketing culture in the context of commercial biotechnology. Overall, biotechnology marketing has received limited attention in prior research despite the accusations that biotechnology companies are not market oriented nor possess marketing competence and skills (Appiah-Adu & Ranchhod 1998, Davies & Brush 1997, Costa et al. 2004). It has been suggested that an interest in 'customer' is an essential feature of marketing in all business contexts (e.g. Kohli & Jaworski 1990; Narver and Slater 1990; Turner & Spencer 1997). We do not deny this, but we wish to point out that it cannot be taken-for-granted what are the meanings attached to 'customer', or any other term which is theoretically related to marketing, in specific business contexts. One obvious difficulty in prior research on biotechnology marketing concerns the question of what 'marketing' actually means. While the prior research on biotechnology marketing typically defines marketing from the outside, i.e. from the perspective of theoretical concepts, our analysis constructs the definition from the inside. This means that we are interested in how the members of the biotechnology marketing culture understand and define what 'biotechnology marketing' is (Eriksson & Rajamäki 2009).

Our article adds to the research of biotechnology marketing by examining it from a cultural perspective. Following Geertz (1973) and others (e.g. Turner 1971; Smircich 1983; Barely 1983) we approach culture as a network of meanings that provide its members a shared and accepted reality. Meanings are linked to various types of symbols, which take on forms such as rituals, slogans, myths, ideologies, stories, ceremonies, language, specialized vocabularies, and material artifacts. However, a symbol can be anything to which its users assign meaning. This means that culture as a whole is symbolic. Therefore, our main message is that the understanding of biotechnology marketing culture requests an analysis of organizations as symbolic entities. Furthermore, we study biotechnology marketing culture from the inside by taking an emic view (e.g. Agar 2007), which focuses on how the members of the culture interpret and make sense of what marketing means in the context of biotechnology.

We examine the culture of marketing in the context of small Finnish biotechnology firms in particular. In the empirical analysis, we focus on examining biotechnology culture as a set of contextually generated meanings. Our analysis is based on a data set including personal interviews, web materials and media texts from five small Finnish biotechnology companies. As background information we use a wide range of media texts on small Finnish biotechnology companies and participant observation data gathered from business seminars and face-to-face discussions with biotechnology people. In this article, we first provide a description of biotechnology marketing culture in the context of the small Finnish biotechnology companies. Thereafter we analyze the recurrent themes in the data and show how they are expressed in various symbolic modes. Further we show how the scientific and commercial symbolic modes are closely intertwined.

In our view the analysis makes two contributions to the biotechnology marketing literature. First, it draws from earlier research focusing on biotechnology marketing and especially, the specificity of biotechnology marketing, but extends it by introducing a cultural perspective advancing the emic view on culture. This perspective opens up a new way of looking at how biotechnology marketing is understood and defined from the inside, i.e. what are the meanings attached to the marketing concept by the actors who work within the economic and social context of biotechnology. Second, by focusing on the culture as root metaphor view, the analysis adds a new dimension to the study of marketing concept as culture, which has been studied from the culture as variable view (e.g. Deshpande & Webster 1989; Webster 1990, 1992, 1993, 1995; Turner & Spencer 1997; Appiah-Adu, Fyall & Singh 2000).

Biotechnology Marketing

Marketing is an activity was developed in the early 20th century for the purpose of promoting and selling products (Webster 1992, Wilkie & Moore 2003). Since then, the concept of marketing has been given different meanings depending on the business context. Accordingly, consumer marketing, business-to-business marketing, non-profit marketing, service marketing, relationship marketing and high tech marketing have been

considered distinct fields of marketing with their own goals, activities and practices (Li & Cavusgil 1995, Bartels 1998, Sheth et al. 1988). The main idea of this article is that these types of marketing fields can be conceptualized and studied as specific marketing cultures.

Some of the changes in how marketing is conceptualized theoretically can be detected in new organizational types (Webster 1992). Although biotechnology marketing has not been characterized as a distinct field of marketing in prior research, its basic science origin and the link between academic research and business make it different from many other industries. Furthermore, biotechnology is related to a new organizational type combining academic and business interests. Since 1980, it has been possible for academic scientists to establish companies while retaining their academic positions. This has caused an increase in the interaction between academic research and business development¹⁹. Consequently, many young biotechnology companies are small university spin-outs led by scientist-managers with academic background (Pisano 2006, Costa et al. 2004, Cetindamar & Laage-Hellman 2003).

Prior research on biotechnology marketing is scarce, but can be divided into three streams. The first stream relies on statistical and survey data from the US and focuses on the biotechnology sector as a whole. This research shows that some biotechnology companies are market oriented when measured by the number of marketing experts employed and the money used for marketing. The second stream focuses on the firm level and suggests that smaller biotechnology companies lack marketing orientation and skills, partly because of their attention to science-based activities and respective competence of the owners and managers. The third stream also focuses on the firm level and addresses the specificity of biotechnology marketing suggesting that it might be, not lacking but merely different, compared to marketing in other businesses.

Marketing in the Biotechnology Sector

The biotechnology industry is made up companies who apply biotechnology techniques to produce goods and services as well as companies who employ the technologies, applications and products including industries such as pharmaceuticals,

agriculture, chemicals and medical device (Hall & Bagchi-Sen 2007). The main areas of operation are human healthcare and services. Most biotechnology companies generate and run on revenue. At the end of 2004 in Europe there were total of 2163 biotechnology companies that generated €21.5 billion revenue. In contrast the US biotechnology sector has 1991 companies but generated €41.5 billion revenue (Critical I).

Companies in biotechnology industry are characteristically very young (Critical I). Many young biotechnology companies are small university spin-outs led by scientist-managers with strong academic background but less knowledgeable and experienced in business (Deeds et al 1999, Pisano 2006, Costa et al. 2004, Cetindamar & Laage-Hellman). Because the scientific background, the young biotechnology companies are claimed to excessively focus on technology (Renko 2006) as well as their capabilities being limited at the upstream stage and lacking resources and capabilities in manufacturing, clinical testing, regulatory approval, marketing and distribution (Madhok & Osegowitch 2000), business development and acquiring market knowledge (Renko 2005). The missing downstream capabilities the biotechnology companies typically acquire from alliances with incumbent companies (Madhok & Osegowitch 2000, Niosi 2003). The study of Renko (2005) explains that many of the young, small biotechnology companies do not think they should worry about the marketability of the end product; instead they focus on meeting the milestones specified in the licensing deals and leave marketing and commercialization issues to the downstream licensing partners.

Lack of Marketing Orientation in Small Biotechnology Companies

Several surveys show lack of experience and expertise on marketing in biotechnology companies. Surveys from US biotechnology industry show that in high R & D biotechnology companies only 11% of the personnel were employed in marketing function (Hall & Bagchi-Sen 2007) and only 28% of the companies CEO had prior experience in managing commercial research facility (Deeds et al 1999). Surveys from Finnish biotechnology industry are compatible with the findings from US. Hermans and Luukkonen (2002) found in their survey that research spin-offs in general have less full-time marketing people compared to companies in other businesses. They also found a

small number of biotechnology companies that had no marketing expertise at all. Insufficient business experience and underdeveloped business ideas were also problems for all companies in their study. The survey made by Hermans et al. (2004) shows, however, that the CEO's of biotechnology companies have on average ten years of business experience and, in addition, some of the personnel have more specific marketing expertise. Tahvanainen (2004) further suggests that for entrepreneurial academic biotechnology spin-offs, the most critical challenge is the shift from the technology-oriented path towards the more market-oriented path.

Much of the prior research on biotechnology marketing is survey-based. Accordingly, the data is collected with structured or semi-structured questionnaires and it is analyzed with quantitative methods aiming at an outsider view of the business from the viewpoint of the researchers. Furthermore, the questionnaires have been designed on the basis of what is known about marketing in other businesses and industries. In most cases, the findings have been compared with knowledge of other industries as well as with knowledge provided by marketing text books. Overall, the specificity of the biotechnology business and, particularly, the combining of business and science have not always been taken into account, which we suggest is a problem in prior research.

However, in one of the qualitative studies, Costa et al. (2004) also concluded that biotechnology companies whose entrepreneurs or directors have a research background, experienced particular difficulties in marketing. The difficulties were related to the lack of both managerial and marketing capabilities and the main problem was to define the scope of the business. Furthermore, Costa et al. (2004) found deficiencies in strategic marketing as well as marketing implementation in areas such as market research; identification of competitors and specific customer needs; product differentiation and positioning. In addition, Renko (2006) concluded that small biotechnology companies face challenge of interpreting the market intelligence they gather. Because of the differing thought worlds of scientist-managers and development managers and the like, their interpretation and understanding of same market intelligence may be different.

The Specificity of Biotechnology Marketing

Prior research has made some efforts to elaborate on the specificity of the biotechnology sector. In their study of UK biotechnology companies Appiah-Adu & Ranchhod (1998) found evidence that highly market-oriented businesses in the biotechnology industry achieve higher profit margins, better overall performance, and a superior degree of growth in market share compared with their relatively low market-oriented competitors. However, they point out that although the firms in the biotechnology sector spend considerable amount of resources into R&D, clinical trials and marketing, they are not market-oriented in conventional sense. Conventional marketing relies on good knowledge of the customer base and soundly developed products. Usually, biotechnology firms have neither of these.

When assessing the marketing orientation of biotechnology entrepreneurs in the US, Renko (2006) found that while biotechnology firms may exhibit market-oriented behaviors, these are not similar to the kinds of market-oriented behaviors suggested by marketing literature. She suggests that especially young and small biotechnology companies may be different from other similar companies because they are not 'naturally' exposed to market knowledge during their first years of operation. She gives two reasons for this: first, young and small biotechnology companies may focus totally on science-driven R&D activities and second, they do not have any products on the market during their first years of operation. This raises a question whether there are deficiencies in the marketing competence of biotechnology companies, or whether biotechnology marketing remains unidentified with the research approaches, methodologies, and data used in earlier studies. For example, market intelligence, for biotechnology SMEs, often emerges as a 'by-product' of other information exchanged within a network of companies. It is perceived not a high priority and it is less formal than traditional generation of market intelligence through customer surveys, meetings with trade partners and customers etc. However, companies assess their potential markets by various informal means by consulting opinion leaders, peers and universities. (Renko et al 2005).

Rajamäki (2008) introduces some features of the biotechnology sector, which can shift marketing into a different direction compared to other industries. First, the uncertainty about whether the technology will work as expected is one of the key

characteristics of the biotechnology business. In addition, the side-effects or unpredicted limitations of use emerging after the product has been launched, can cause a shutdown of an entire product line or cut down the estimated market potential. Third, a biotechnology product's life cycle can face a premature death due to the challenges originating from market uncertainties and from the lacking capability of a small company to nurture the existing product line. The fourth issue is the threat of obsolescence, which is high in a market where new innovations are introduced at a rapid rate. The fifth issue concerns the capability of protecting intellectual property rights. Finally, these challenges make it difficult to estimate the size of the potential market in biotechnology.

Industry expert John Mack (2006) argues in the *Nature Biotechnology* that the challenge for biotech companies in the coming years is to develop a marketing strategy that will not negate the innovative, science-based culture of the organization. Rather than “dumbing-down” the science part to fit the traditional direct-to-consumer advertising format, biotech companies need to master communications channels that allow the space and interactive tools to explain the science behind the product.

Cultural Perspective on Biotechnology Marketing

Culture as Constructed and Symbolic

While there are many approaches to the study of culture in general and organizational cultures in particular (see e.g. Martin 1992, 2001), our study draws from the constructionist and symbolic approaches to organizational and occupational cultures (e.g. Barley 1983; Smirchic 1983;). These approaches have grown out of the research done by the social anthropologist Clifford Geertz (1973). While many types of studies can be included into the body of symbolic studies on culture, a general characteristic of such studies is to view culture as a network of meanings or shared experiences and interpretations that provide members with a shared and accepted reality.

Constructionist and symbolic approaches to culture have been adopted by researchers in various fields of social sciences with differing objectives. In our study, we address biotechnology marketing culture from the organizational symbolism viewpoint.

Organizational symbolism views culture as a metaphor for the shared symbols and meanings of organizational participants (Smircich, 1983). Accordingly, every culture has its own symbols associated with human action, behavior, norms, assumptions and material artifacts. Therefore, symbols embody and express an organization's culture. Symbols may take on numerous forms including rituals, slogans, myths, ideologies, stories, ceremonies, language and specialized vocabularies and material artifacts. However, a symbol can be anything to which its users assign meaning. This means that culture as a whole is symbolic. Furthermore, the meaning of a specific symbol is neither instinctive nor automatic, but produced and maintained by the specific culture. This means that, for instance, the word 'customer' can be attached different meanings in different types of industrial cultures. However, the meanings are not static and fixed, but they can shift and transform. From this follows that culture is open to interpretation and re-interpretation and, therefore, it has some potential to change.

Finally, from a constructionist point of view, a culture does not possess an objective reality *'but rather is created daily by the linguistic enactments of its members in the course of their everyday communications between each other; that is, by the way in which members talk, hold discourse, share meanings'* Evered (1983, 26). To study and understand culture, a researcher must learn to read and interpret its patterns of symbolic discourse, which focuses attention to the study of language practices.

Emic and Etic Approaches to the Study of Biotechnology Culture

Much of the research on marketing is carried out from the etic or the outsider view, which aims to understand the world of marketing in scientific terms (Agar 2007, Douglas & Craig 2006). The etic view assumes that the meanings of verbal constructs (e.g. words, concepts, theories) are universal and applicable across social contexts. In other words, there is not an interest in how the members of the organization attach meanings to the concept of marketing, and more generally, define what they consider central in their marketing culture. When studying biotechnology marketing with the etic view, the interest would lie in the question: how can researchers as outside observers explain and define what marketing is in biotechnology companies?

From a constructionist starting point, it can be argued that while constructs are not expressed in the same way in different social contexts, the emic or the insider view is required in the study of culture (Agar 2007). From a constructionist point of view, the way we view the world is always tied to the perspective of our own culture. Therefore, if we are to make sense of a culture that is not our own, we must try to situate ourselves in the position from which it was constructed. Students of culture use the term emic or insider view to refer to the idea that only members of a culture possess valid knowledge of their own symbolic world and the meanings attached to action, practices, behavior and material artifacts. The emic view indicates that researchers study issues that are meaningful to the members of the culture, which may not be the same issues that the researcher is interested in. Within the context of biotechnology, the emic approach is concerned with the world of the people who are involved in action that they have defined as ‘marketing’ (Cook 2005). In other words, when studying biotechnology marketing with the emic view, the research interest lies in the question: how do the members of the biotechnology sector understand and explain what marketing means in the context of biotechnology companies?

Although the literature makes a difference between the emic and etic views, many researchers suggest that it useful, and even necessary, to combine them (Agar 2007, Douglas & Craig 2006) This is also what we aim to do. In the empirical analysis, the focus will be on the construction of an insider view of the biotechnology marketing culture of small Finnish biotechnology companies. Thereafter, the findings of the analysis will be discussed from the outsider view making an effort to produce theoretical constructs that could be applied across the biotechnology industry.

Five Cases of Biotechnology Marketing

Data, Methods and Analysis

Our main interest lies in studying and understanding a culture that is partly familiar and partly foreign to us. As business researchers, we are familiar with marketing but not with biotechnology. Our analysis is based on intensive case study design where

the main idea is to study one specific case in order to understand how it works. In our study, the case to be studied is biotechnology marketing culture. Following the qualitative research tradition, the aim is to develop an understanding of the culture from the inside and thereafter seek for analytical rather than universal generalizations (Eriksson & Kovalainen 2008).

Because the Finnish biotechnology sector does not exist as a branch in the official statistical classification (Hermans et al. 2005), we selected five domestically owned companies from the register of the Finnish biotechnology industry association to be included into the study. Company names and any information that might compromise their anonymity have been removed from the analysis. The five companies are:

Biotech Ltd. is a privately held company which was founded in 2001 and works in close collaboration with a university medical research centre. The company offers a platform for the simulation of biological research as well as a platform for in vitro studies including software for data management. The company employs scientists from medicine, molecular biology, physics, computer science, electrical- and mechanical engineering, and the number of personnel was 40 in 2007.

ContractResearch Ltd. was founded in 2000 to offer pre-clinical contract research services on a specific therapeutic area. The number of personnel is 30 of which 26 are scientists and 4 administrative personnel, and the company turnover was around 900 000 euros in 2007.

BioSolution Ltd. was established in 2001 and it first operated in facilities located on the university campus. Later on, the company moved to a business park hosting technology-intensive companies. The business idea focuses on offering a new kind of hygiene solution for the food processing industry. The company employs two people full-time and the turnover was around 100 000 euros in 2007.

Special Compounds Ltd. is a micro company, which was established by other companies in 2004. The company produces special compounds for the needs of research organizations and industrial manufacturers and the production facilities are located on the university campus in a business incubator. The company employs two full-time experts: a production chemist and a production engineer. The turnover of the company was around 300 000 euros in 2007.

Platform Technologies Ltd. was founded in 2002 based on the collaboration between a Finnish university and a government research institution. The company offers a platform which enables the automation of certain tasks of in vitro research, which were earlier handled manually. The company employs seven people and the turnover in 2007 was around 600 000 euros.

We interviewed the scientist-managers of these five companies by phone and the interviews were recorded and transcribed. The interviews followed the idea of narrative and open interviews meaning that the interviewees were encouraged to speak freely and with as little guidance from the interviewer as possible (Eriksson & Kovalainen 2008). In this spirit, we asked the scientist-managers to tell a story about marketing in their own company. Additional questions were asked to clarify some parts of the story. During the interview the interviewer did not propose any definitions of marketing because the aim was to find out what ‘marketing’ means to the interviewees. In addition to the interviews, we have analyzed the web-pages of the companies as well as collected media articles concerning their operations. The web pages provide information about each company, its personnel, products and services, strategies, venues where the company presents itself as well as the scientific activities of the company and its personnel (e.g. conferences attended and articles published). As background information for the study, we have collected and analysed media texts concerning small biotechnology companies and made small scale participant observation in seminars and face-to-face discussions with biotechnology people.

In the following we use our data and background information to give a multifaceted description of the biotechnology marketing culture in order to *show the ways symbols are linked in meaningful relationship and demonstrate how they are related to the activities of the people in a setting* (Smircich 1983, 350). After that, we analyze the recurrent themes that are expressed in various symbolic modes. Firstly, we take insider view with focus on how the scientist-managers interpret and understand biotechnology marketing. Secondly, we take outsider view that considers the practitioners’ view in relation to wider theoretical and practical knowledge of marketing.

Biotechnology Marketing Culture

“Well, our case is such that all our orders come through the internet and we cannot sell in a way as we were selling a dishwasher, so this is more about informing in a way that we present our products among other companies so that people would know what they can order from us. But like the sort of actual selling, as in the case of consumer goods or such, these things cannot really be sold.”

Even the smallest Finnish biotechnology companies have their own web pages introducing the company and informing customers about their products and services, and about their scientific competence. Some of the products are so special in nature that they cannot be marketed or sold, just informed about. In this case, the company web pages can be designed to allow the customers to make direct orders through the Internet. However, not all biotechnology products and services find customers by means of being informed about and then ordered through the Internet. When asked about ‘what is marketing’ in his company, one of the scientist-managers answered: *I do not understand the question... We contact potential customers directly - maybe this is the best way to describe it.* Although not understanding the question, the centrality of the customer is evident in his answer. In contrast to the first company relying on the Internet as the marketer of its products, direct contact with the customer defines marketing in the latter case. However, no matter how customers are searched for, the justification for the chosen practice often is *‘the special nature of the product’*.

Customers of small Finnish biotechnology companies comprise of business firms in biotechnology and other industries. Research labs at universities and other research institutions can also serve as important customers. Furthermore, it often happens that customers are business partners in R&D or some other activities. Overall, small biotechnology companies are involved in intensive personal and face-to-face contacting with the customers and partners. The scientist-managers of small Finnish biotechnology companies visit their customers’ and partners’ premises on a regular basis and meet with them in domestic and international trade fairs, scientific conferences and research seminars. Many of the customer and partner companies are represented by scientists, who

may very well be student friends or colleagues from academic and professional research circles.

The founder-scientists and other owners of the small Finnish biotechnology companies serve as an important resource for marketing activities: *“Marketing competence has actually come to this company through the owners”*. In some cases, the founder-scientists have acted as the sales and marketing persons for the company for several years, and in others, the company has attracted new owners who operate in and have expertise of the customer and partner interface. The new owners, be they individuals or companies, may even help in operative sales and marketing tasks if they have strong prior experience in marketing. A small biotechnology company can rely on the marketing expertise of its owners in various ways. The company may utilize the resources of its owner companies when compiling mailing lists of potential customers from the owner companies’ databases. It can also try to increase awareness of its products at business fairs at its owner companies’ stands. It can also happen that a new owner company has such a good fit with the biotechnology company that it has bought that *“... their products are very similar to ours and also their customer groups are very much the same as ours”*. In the smallest companies some marketing activities, such as advertising, can be outsourced. In such an unfortunate case that the founder-scientists or the other owners do not have any marketing expertise, the company needs to employ sales and marketing people as soon as it grows a little bit bigger. Marketing manager of a growing biotechnology company described their system in the following way: *‘The first marketing experts were recruited within a year after the business got really started and, in principle, the same pattern has continued since then’*.

The small Finnish biotechnology companies are also very dependent on the academic merits of their founder-scientists when building and maintaining relationships with their customers and partners. It is absolutely crucial that the founder-scientist has prestige and good connections within the scientific community. If he has not, there is a serious problem. As one of the managers explain:

“...we needed really quickly rely on the scientific reference list that the scientist had done before.... So it meant almost invariably taking the published articles that we

had and taking them directly to the pharmaceutical companies, actually to the scientists inside those companies that were doing the same kind of work”.

Within the Finnish biotechnology business it is crucial to make constant effort to generate new scientific data and to present it to the other companies and to the scientific community. To present their scientific competence, companies publish information about the conferences that they plan to attend, or have already attended on their web pages. The web pages of the companies also list articles that their managers and employees have published and patents that they have been granted. Some of the companies publish white papers elaborating research developments and requirements in their field of scientific expertise. The dynamism of the industry helps in getting new research known rather quickly. If you get the research done in your own company known among scientists in any other company, the word gets around about your good work as the scientists quickly move from one company to another.

For the purpose of getting their scientific research known, the scientists working in small biotechnology companies publish academic articles in academic journals and present their research results at scientific conferences and commercial trade fairs. For some small companies, especially the ones that have started to grow and internationalize, it is a status issue to get awareness at the larger international scientific conferences. In addition, the scientists give expert lectures on university courses as well as make presentations in university workshops and more practical business events hosted by business incubators and other intermediary organizations. Usually, all this takes place rather effortlessly because many of the scientists working in small Finnish biotechnology companies still hold academic positions at universities, or have done so during their earlier careers.

Analysis and discussion

In this section we analyse and interpret the themes of biotechnology marketing culture. From the data we identified two distinct themes: ‘product and service marketing’ and ‘marketing of scientific competence’. Product and service marketing resembles the general textbook conception of marketing, whereas marketing of scientific competence is

closely linked to biotechnology research. These two themes, expressed in various symbolic modes, represent the heart of the symbolic analysis that we have made (see Smircich 1983, 351). Table 1 shows the themes and the symbolic modes related to each of them.

Table 1: Themes and symbolic modes of biotechnology marketing culture

Theme:	Product and service marketing	Marketing of scientific competence
Symbolic modes:		
-Rituals (mechanisms that produce solidarity)	Customer visits	Expert lectures, campus visits
-Ceremonies (social drama which require design, elaboration, planning and careful management)	Trade fair attendance, attract and bring in new owners	Conference attendance
-Heroes		Founder-scientists
-Artefacts	Web-shop, price-list	Patents, reference lists, articles, white papers, web-pages, new data
-Language and vocabulary	Titles such as CEO, business development manager, management team	“Specific nature of the product”

Rituals are mechanisms that produce solidarity (Strati 1998) towards a group of people or an ideal, for instance. Small biotechnology companies actively engage in rituals such as making company and campus visits and giving expert lectures, the purpose of which is to inform others about their scientific competence. What is specific about some of the rituals is that they follow the norms of academic practices. When doing company visits, the two themes, marketing of scientific competence and marketing of products and

services, are interestingly intertwined. Visiting customers at their premises is at the core of the traditional marketing concept. In spite of this, the actual visits are often more academic than business oriented. What makes the visits academically oriented is the fact that in most cases the hosts of the customer and partner companies are scientists and previous colleagues or friends from academic circles. Second, the purpose of the visit is to present the scientific artefacts produced by the company including the results of earlier research projects, scientific publications, and reference lists. The companies do not comprehend these rituals as sales calls, but instead, they understand the visits as informing through the act of giving a presentation. Therefore, small biotechnology companies are actively engaging in rituals to gain solidarity from the scientific community as well as from their customer and partner companies. All of this is constructed as a taken-for-granted idea of what the biotechnology business is about.

Ceremonies and rites are social dramas which require design, elaboration, planning and careful management (Strati 1998). The recurring ceremonies that the small biotechnology companies take part in include scientific conferences and research seminars. The attendance in these ceremonies can be seen as a rite of integration. The manifest expressive consequence of taking part in a conference is to communicate about the scientific expertise of the company. However, there are latent expressive consequences as well. By taking part in an academic conference, the company members reaffirm the importance of basic science and their own identities as scientists. At the same time, they also acknowledge the validity of academic ranks. Therefore, the participation in purely scientific activities enhances the commitment of the company to the scientific world. The companies also participate in other ceremonies such as trade fairs. At the trade fairs, they promote the artefacts that express their scientific competence including new data, reference lists and publications. In these events, the marketing of products and services as well as the marketing of scientific competence are closely intertwined. Even though they promote their scientific competence at trade fairs and identify themselves as scientists, the latent expressive consequence is that by participating in the ceremony they acknowledge the importance and significance of purely commercial ceremonies as well.

Yet another ceremony is attracting and bringing in new owners who will then help in service and product marketing efforts. The reason for bringing in new owners is to

strengthen the financial structure of the company. It is noticeable that when asked about ‘what is marketing’, the respondents talk about new owners and their help in everyday marketing activities. Therefore, the latent expressive consequence of this ceremony is the acknowledgement that marketing expertise has significance in the business and, furthermore, that small biotechnology companies need to acquire marketing expertise from the outside. However, the position of new owners and outsider marketing experts is to be a helper and subordinate to the scientist-founders who are embedded in heroism. The small companies rely on the scientific work of the scientist-founders and their prestige in the scientific community, which are the building blocks of their seniority. Product and service marketing experts are not attached with meanings of heroism but, rather, they are constructed as the helpers of the scientist-founders.

Overall, rituals and ceremonies are used to sustain the idea that it is natural that the managers and employees of small biotechnology companies construct their identities as ‘scientists’ rather than ‘business people’. In addition, language and vocabulary are used to produce a taken-for-granted idea that biotechnology products are different from other products that are not science based. For instance, the notion of “specific nature of the product” is used to rationalize the reliance on specific types of marketing activities suited to the science-based products and services that the companies offer. What is interesting, however, is that the scientists working in small biotechnology companies call themselves with titles that are distinctive from the commercial world. The scientist-founder is usually appointed as the CEO and the other senior scientists are members of the management team. This way they acknowledge that even though science is their primary focus, the compliance with the business world is also necessary and a significant aspect of their operations.

Conclusions

While prior research has investigated how a pre-defined theoretical idea of marketing has been adopted in biotechnology companies, we have produced new knowledge about biotechnology marketing from the point of view of the members of the biotechnology marketing culture. Furthermore, we have analysed this knowledge from a

symbolic perspective paying attention to the network of symbols and meanings attached to biotechnology marketing. Accordingly, we have shown how product and service marketing and marketing of scientific competence are intertwined, carried out through various types of rituals and ceremonies, and connected to symbolic modes of language. Typically, both types of marketing are performed more or less simultaneously and by the same people.

Based on our findings, we conclude that scientific symbolic modes frame the marketing activities of small biotechnology companies and provide them with the meaning of their existence. Seeing from the inside, it is taken-for-granted that without science and scientific competence, there are no viable products or services to be offered to the market. Furthermore, through various symbolic modes (rituals, ceremonies and language), science is constructed as a natural part of biotechnology marketing activities. The purpose of this is to decrease the tension between science and commerce, which has led to such general requests as becoming more commercially and marketing oriented.

References

- Agar, M. (2007). "Emic/etic," in: *Blackwell Encyclopedia of Sociology*. Ed. George Ritzer. Oxford, Blackwell Publishing.
- Alvesson, Mats (2002). *Understanding organizational culture*. Sage.
- Appiah-Adu K., Fyall A., & Singh, S. (2000) "Marketing culture and customer retention in the tourism industry," *Service Industries Journal*, 20(2), 95-113.
- Appiah-Adu, K. & Ranchhod, A. (1998) "Market Orientation and Performance in the Biotechnology Industry: An Exploratory Empirical Analysis," *Technology Analysis & Strategic Management*, Vol. 10 No. 2, pp. 197-210.
- Barley, S. (1983) Semiotics and the Study of Occupational and Organizational Cultures, *Administrative Science Quarterly*, Vol. 28, No. 3, pp. 393-413.
- Bartels, R. (1988) *The History of Marketing Thought*. Publishing Horizon, Ohio.
- Cetindamar D., Laage-Hellman J. (2003). "Growth dynamics in the biomedical/biotechnology system," *Small Business Economics*, 20(4), 287-303.

- Cook, D. (2005). "Pursuit of the 'inside view': training the research gaze on advertising and market practitioners," in: Handbook of Qualitative Research methods in Marketing. Ed. Belk R. Edward Elgar Publishing.
- Costa, C., Fontes, M., Heitor, M. (2004). "A methodological approach to the marketing process in the biotechnology-based companies," *Industrial Marketing Management*, 33, 403-418.
- Critical I Ltd. (2006) "*Biotechnology in Europe 2006 Comparative Study*," The European Association for Bioindustries.
- Davies, W., Brush, K.E. (1997). "High-Tech Industry Marketing: The Elements of a Sophisticated Global Strategy," *Industrial Marketing Management*, 26, 1-13.
- Deeds, D., DeCarolis, D., Coombs, J. (1999) "Dynamic capabilities and new product development in high technology ventures: An empirical analysis of new biotechnology firms," *Journal of Business Venturing*, 15, 211-229.
- Deshpande, R., Webster, F. (1989) "Organizational Culture and Marketing: Defining the Research Agenda," *The Journal of Marketing*, 53(1), 3-15.
- Douglas, S., Craig, S. (2006). "On Improving the Conceptual Foundations of International Marketing Research," *Journal of International Marketing*, 14(1), 1-22.
- Eriksson P., Kovalainen A. (2008). *Qualitative Methods in Business Research*. London, Sage Publications Ltd.
- Eriksson, P., Rajamäki, H. (forthcoming). "Biotechnology marketing – insider and outsider views," *Journal of Commercial Biotechnology*.
- Evered, E. (1983). "The language of organizations: the case of the navy" in: *Organizational Symbolism*. Ed. Pondy, L., Frost, P., Morgan, G., Dandridge, T. Greenwich, JAI Press, 125-143.
- Geertz, C. (1973). *The interpretation of cultures*. New York: Basic Books.
- Hall, L., Bagchi-Sen, S. (2007). "An analysis of firm-level innovation strategies in the US biotechnology industry," *Technovation*, 27(1-2), 4-14.
- Hermans, R. and Kulvik, M. and Tahvanainen, A. (2004). "Etla 2004 survey on the Finnish biotechnology industry –Background and Descriptive Statistics," *ETLA Discussion papers*, 978, 1-40.

- Hermans, R. and Kulvik, M. and Ylä-Anttila, P. (2005). "International mega-trends and growth prospects of the Finnish biotechnology industry: Recent economic research and policy implications," *Journal of Commercial Biotechnology*, 11(2), 134-145.
- Hermans, R., Luukkonen, T. (2002). "Findings of the Etna survey on Finnish biotechnology firms," *ETLA Discussion papers*. 819, 1-30.
- Kohli, A.K., Jaworski, B.J. (1990). "Market orientation: the construct, research propositions, and managerial implications," *Journal of Marketing*, 54, 1-18.
- Li, T., Cavusgil, T. (1995) "A Classification and Assessment of Research Streams in International Marketing," *International Business Review*, 4(3), 251-277.
- Mack, J. (2006) "Counterpoint: biotech needs more than DTC as usual," *Nature Biotechnology*, 24(3), 267.
- Madhok, A. & Osegowitch, T. (2000) "The International Biotechnology Industry: A Dynamic Capabilities Perspective," *Journal of International Business Studies*, 31(2), 325-335.
- Martin, J. (2001) "*Organizational Culture: Mapping the Terrain*". Sage.
- Martin, J. (1992). "*Cultures in Organizations: Three Perspectives*." Oxford University Press, USA.
- Narver, J.C., Slater, S.F. (1990). "The effect of a market orientation and business profitability," *Journal of Marketing*, 54, 20-35.
- Niosi, J. (2003). "Alliances are not enough explaining rapid growth in biotechnology firms," *Research Policy*, 32(5), 737-750.
- Pisano, G. (2006). "Can science be a business? Lessons from biotech," *Harvard Business Review*, 84(10), 114-125.
- Rajamäki, H. (2008) "Anticipating and managing the challenges of biotechnology marketing," *Journal of Commercial Biotechnology*, 14(3), 225-231.
- Renko, M. (2006). "*Market Orientation in Markets for Technology- Evidence from Biotechnology Ventures*," Ph.D. dissertation, Turku School of Economics.
- Renko, M., Carsrud, A., Brännback, M. and Jalkanen, J. (2005). "Building market orientation in biotechnology SMEs: balancing scientific advances," *International Journal of Biotechnology*, Vol. 7, No. 4, pp.250–268.
- Sheth, J.N., Gardner, D.M. and Garrett, D.E. (1988) *Marketing Theory: Evolution and*

Evaluation, John Wiley & Sons, New York.

- Smircich, L. (1983). "Concepts of Culture and Organizational Analysis," *Administrative Science Quarterly*, 28, 339-358.
- Strati, A. (1998). "Organizational Symbolism as a Social Construction: A Perspective from the Sociology of Knowledge," *Human Relations*, 51(11), 1379-1401.
- Tahvanainen, A. (2004). "Growth inhibitors of entrepreneurial academic spin-offs: The case of Finnish Biotechnology," *International Journal of Innovation and Technology Management*, 1(4), 455-475.
- Turner, B. (1971) "Exploring the Industrial Subculture." New York, Seabury Press.
- Turner, G., Spencer, B. (1994). "Understanding the marketing concept as organizational culture," *European Journal of Marketing*, 31(2), 110-121.
- Webster, C. (1990). "Toward the measurement of the marketing culture of a service firm," *Journal of Business Research*, 21(4), 345-362.
- Webster, C. (1992). "What Kind of Marketing Culture Exists in Your Service Firm? An Audit," *Journal of Services Marketing*, 6(2), 54 – 67.
- Webster, C. (1993). "Refinement of the marketing culture scale and the relationship between marketing culture and profitability of a service firm," *Journal of Business Research*, 26(2), 111-131.
- Webster, C. (1995). "Marketing culture and marketing effectiveness in service firms," *Journal of Services Marketing*, 9(2), 6-21.
- Webster, F. (1992). "The Changing Role of Marketing in the Corporation," *Journal of Marketing*, 56, 1-17.
- Wilkie, W., Moore, E. (2003). "Scholarly Research in Marketing: Exploring the "4 Eras" of Thought Development," *Journal of Public Policy & Marketing*, 22(2), 116-146.

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DOES FOUNDER REPUTATION SPEED UP VENTURE FINANCING IN PRIVATE AND PUBLIC MARKETS?

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New Ventures with greater resources (e.g. human capital, founder educational credentials, founder reputation) enjoy an advantage during IPO (Hsu, 2007). Some studies demonstrate that founder presence leads to more successful IPOs (Nelson, 2003). However, other research has established that founders may not be good negotiators which results in underpricing (Certo et al, 2001). Further, founder early exits may actually increase venture speed to an IPO (Beckman et al, 2007: 165). Reputation may provide additional advantage to a venture (Rindova et al., 2007). Thus, multiple venture and founder related factors impact a venture's ability to reach IPO.

In addition, there is mounting evidence that alliances with influential partners – venture capitalists (VCs), established companies and investment bankers – allow ventures to launch IPOs faster and more successfully (Chang, 2004). Still, a broader view on interorganizational alliances warns about their possible negative effects (Ahuja, 2000). Given such mixed results regarding founder impact on venture speed to public markets and the effectiveness of collaboration and interorganizational alliances, we pose three research questions

Track: 5. Technology and Knowledge Intensive Entrepreneurship

UNIVERSITY-SME CO-OPERATION: BENCHMARKING THE BEST

by M. Geissler, S. Jahn, S. Kaminski and C. Zanger¹

The transfer of knowledge and technologies from scientific institutions into the marketplace is an important factor for innovative performance at the firm-, industry-, and country level. The present study systematically analyses 19 German nationwide successful transfer projects regarding characteristics that are critical for the technology transfer process. Results show only slight and unsystematic differences with respect to these characteristics. However, it turns out that different stakeholders of the transfer process notably differ in their priorities regarding the evaluation of transfer success. This highlights the importance of ways to overcome this barrier and to enable a more efficient technology transfer process.

Introduction

The transfer of knowledge and technologies from scientific institutions into the marketplace is an important factor for innovative performance at the firm-, industry-, and country level (Arvanitis et al. 2008). Furthermore, literature especially highlights the importance of small enterprises for fostering technological innovation (Schumpeter 1934). However, research shows serious difficulties for SMEs to establish efficient university-industry relationships arising from their resource constraints (Fransman 2008).

In this light, the aim of the present study is to compare successful transfer projects based on different characteristics that have been identified as critical in prior research (i.e., type of industry, transfer activities, transfer partner, and special distance). The sample consists of 19 finalists of a prestigious

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nation-wide German technology transfer award. In addition, we use the jury's ratings of these projects for further analyses. The jury reflects important stakeholders of the technology transfer process namely eight leading representatives from either business, research, or their interface (Siegel et al. 2004).

Literature Review

Within the conceptual and empirical literature, different research streams exist that analyze the process of technology transfer between universities and business. Thereby, they analyze this domain from different perspectives and focus on different aspects. As a result, there is evidence that a number of characteristics might influence the technology transfer process and its success. The following section addresses these characteristics.

Type of Industry

According to the results of Bekkers and Bodas Freitas (2008) there is evidence that the specific type of industry (e.g., chemical industry, pharmacy industry or electrical industry) influences the technology transfer process. Other studies show that public research is critical in specific industries and especially across the manufacturing sector. But it is difficult to find a clear connection between different fields of research and specific types of industry. In fact, literature provides evidence that there are differences. Some research results seem to be transferable only to a specific kind of industry, while others are used in a large number of different fields of industry (Cohen et al. 2002, Schartinger et al. 2002). Additionally, policy makers address this fact when they seek to foster technology transfer within specific types of industry (e.g. biotechnology, nanotechnology).

Transfer Activities

Literature highlights that the technology transfer process is complex and eclectic. There is a broad range of different activities, forms or channels which link universities with businesses. Depending on

the research objective, literature distinguishes up to 20 different technology transfer activities. In many studies the following different activities are mentioned: use of university facilities, lectures held by practitioners, patents, licenses, exhibition at trade fairs, participation in conferences and workshops, joint supervision of master or PhD theses, spin-offs, publications, staff exchange, contract research, and services to industry (e.g. Bekkers/Bodas Freitas 2008; Debackere/Veugelers 2005; Schartinger et al. 2002).

In addition to industry type, empirical studies suggest that the type of transfer activity also matters. Furthermore, in most studies licenses and patents are objects of investigation and are used as key measures of the innovative output of technology transfers (Bach/Llerena 2007). But during the last years critical voices have been raised, arguing that this approach might result in an underestimation of universities contribution within the innovation system (Agrawal 2001; Fritsch/Slavtchev 2007).

Type of Transfer Partner

Besides creating an own commercial institution in terms of spin-offs, universities may have different partners from business, such as major companies or SMEs. Prior research indicates that the technology transfer between universities and major companies might be less difficult (Colyvas et al. 2002). In contrast, transfer of knowledge and technologies from universities to established SMEs seems to be more difficult due to the latter's resource constraints (Fransman 2008). In this context, different studies underline the importance of absorptive capacity of the respective SME (Kodama 2008; Coccia 2008). In this respect, Cohen and Levinthal (1989, 1990) argue that a company's performance in applying university research for own commercialization activities is a function of its investment in R&D.

Spatial Distance

Recent research adds a further factor which influences the transfer activities and their economic impact. Coccia (2008) gives evidence that there is a relationship between the geographic distance of the

technology's source and its recipient and the technology transfer. The author shows that with increasing distance the economic impact of the technology and knowledge transfer decreases. It might be argued, then, that knowledge and technology spillover are spatially bounded (Agrawal 2002; Coccia 2008; Krugman 1991).

Stakeholders of Technology Transfer

Following Siegel and colleagues (2004), it could be stated that there are main differences in the motives of the different technology transfer stakeholders (see Table 1) which might hamper the technology transfer process. Thereby, the authors determine that the university scientists represent the starting point of the whole process. Thus, research results and their disclosure seem to be crucial factors of the transfer of new technologies. Moreover, it is necessary that scientists or involved intermediaries recognize the potential for commercial application of inventions.

Table 1: Key stakeholders in the technology transfer process (Siegel et al. 2004)

Stakeholder	Actions	Primary motive(s)	Secondary motive(s)
University scientist	Discovery of new knowledge	Recognition within the scientific community, publications, grants	Financial gain and a desire to secure additional research funding
Intermediaries ²	Work with faculty members and firm(s)/ entrepreneur to structure deals	Protect and market the university intellectual property	Facilitate technological diffusion and secure additional research funding
Firm/ entrepreneur	Commercializes new technology	Financial gain	Maintain control of proprietary technologies

Regarding intermediaries, literature suggests that it may be critical for them to overcome existing organizational barriers (e.g., appropriate incentives, direction of R&D activities), even if they lack a critical mass (Debackere/Veugelers 2005).

² Note: Intermediaries might be institutions within the university organization (e.g. technology transfer offices) or third parties from outside the university (e.g. different associations for special industries)

Method

The discussion below is based on 19 case studies from Germany. The sample consists of the finalists of a prestigious nation-wide German technology transfer award (endowed with 20,000 Euros). The respective transfer projects are compared to analyze whether there appear patterns that distinguish the very good from the best. The chosen projects cover a variety of industries and created hundreds of jobs in the last years. All 19 cases include co-operation of universities and companies. Eight leading representatives from either business, research, or their interface rated these transfer projects. The ratings are used to gain insights into the drivers of very successful transfer projects. It has to be noted that we do not aim to identify differences between successful and failed technology transfer projects. The focus is exclusively on successful projects. In so doing, we try to identify what those projects have in common and what differentiates them. Table 2 gives an overview of these projects.

Table 2: Description of the analyzed cases

Project A		Project B:	
Spatial distance:	0 km	Spatial distance:	0 km
Transfer Period:	1997 – present	Transfer Period:	2004 – present
Industry:	Electrical engineering/IT	Industry:	Electrical engineering/IT, environmental technology
Transfer Activities:	Joint supervision of master or PhD theses; spin-offs	Transfer Activities:	Joint R&D projects; joint supervision of master or PhD theses; lectures held by practitioners; staff exchange; spin-off
Success:	36 jobs created	Success:	12 jobs created
Award:	Yes (nationwide)	Award:	No
Project C		Project D:	
Spatial distance:	0 km	Spatial distance:	173 km
Transfer Period:	1980 - 2007	Transfer Period:	2004 – 2006, 2008 - 2009
Industry:	Nanotechnology	Industry:	Mechanical engineering/IT
Transfer Activities:	Publications; participation in conferences/workshops; contract research, service to industry; use of university facilities	Transfer Activities:	Joint R&D projects
Success:	14 jobs created	Success:	7 jobs created
Award:	Yes (nationwide)	Award:	No

Project E:		Project F:	
Spatial distance:	20 km	Spatial distance:	0 km
Transfer Period:	2005 – present	Transfer Period:	2000 – present
Industry:	Mechanical engineering/IT	Industry:	Mechanical engineering, environmental technology, material science
Transfer Activities:	Spin-offs	Transfer Activities:	Publications; participation in conferences/workshops; joint R&D projects; exhibition at trade fairs; patents
Success:	20 jobs created	Success:	2 jobs created
Award:	No	Award:	No
Project G:		Project H:	
Spatial distance:	435 km	Spatial distance:	0 km
Transfer Period:	2005 - 2006	Transfer Period:	2005 – present
Industry:	Mechanical engineering, material science	Industry:	Electrical engineering/ IT, biotech/medicine
Transfer Activities:	Publications; participation in conferences/workshops; Joint R&D projects	Transfer Activities:	Joint R&D projects; spin-off
Success:	70 jobs created	Success:	30 jobs created
Award:	Yes (nationwide)	Award:	No
Project I:		Project J:	
Spatial distance:	266 km	Spatial distance:	0 km
Transfer Period:	2004 – present	Transfer Period:	2001 – present
Industry:	Management	Industry:	Biotech/medicine
Transfer Activities:	Publications; participation in conferences/workshops; contract research, services to industry; joint R&D projects	Transfer Activities:	Participation in conferences/workshops; joint R&D projects; spin-off
Success:	Turnover about 5 million euro	Success:	22 jobs created
Award:	No	Award:	No
Project K:		Project L:	
Spatial distance:	0 km	Spatial distance:	0 km
Transfer Period:	2006 – 2008	Transfer Period:	1998 – present
Industry:	Biotech/medicine	Industry:	Electrical engineering/IT
Transfer Activities:	Staff exchange; licenses; spin-off	Transfer Activities:	Publications; joint R&D projects; joint supervision of master or PhD theses; lectures held by practitioners; staff exchange; spin-offs
Success:	3 jobs created	Success:	35 jobs created
Award:	No	Award:	No

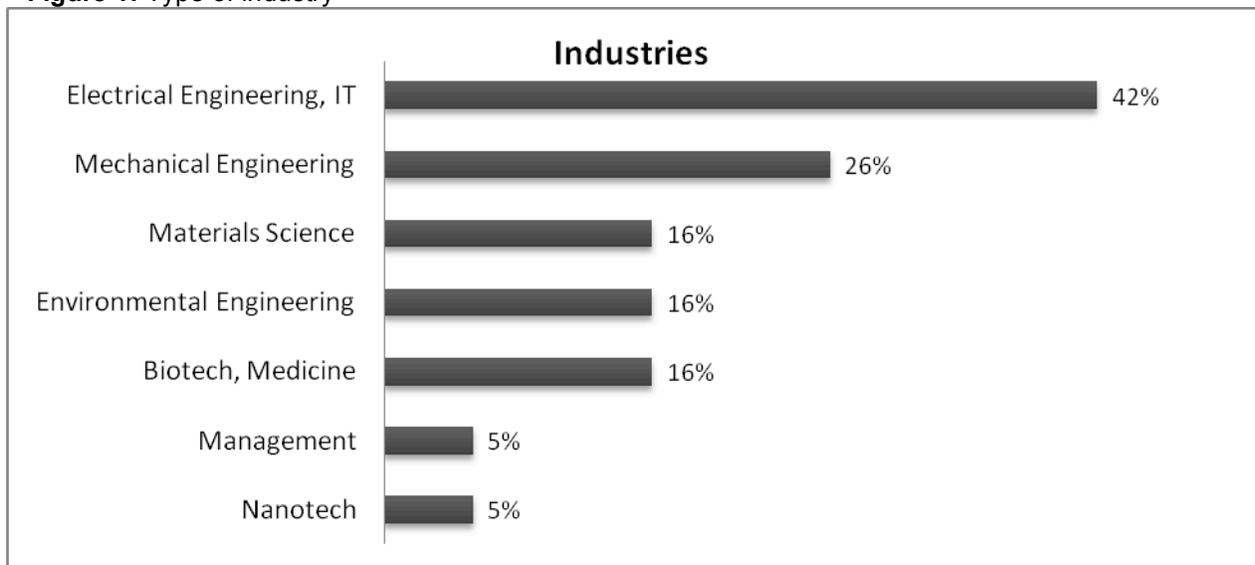
Project M:		Project N:	
Spatial distance:	0 km	Spatial distance:	437 km
Transfer Period:	2006 –2007	Transfer Period:	2005 –2006
Industry:	Electrical engineering/IT	Industry:	Mechanical engineering
Transfer Activities:	Joint R&D projects; use of university facilities; spin-off	Transfer Activities:	Contract research, services to industry
Success:		Success:	4 jobs created
Award:	No	Award:	No
Project O:		Project P:	
Spatial distance:	0 km	Spatial distance:	0 km
Transfer Period:	2005 –2006	Transfer Period:	2007 –2013
Industry:	Biotech/ medicine	Industry:	Electrical engineering/IT
Transfer Activities:	Contract research, services for industry; exhibition at trade fairs; spin-off	Transfer Activities:	Contract research, services to industry; joint supervision of master or PhD theses; staff exchange; licenses
Success:	6 jobs created	Success:	19 jobs created
Award:	No	Award:	No
Project Q:		Project R:	
Spatial distance:	0 km	Spatial distance:	0 km
Transfer Period:	2006 – present	Transfer Period:	2005 - 2008
Industry:	Electrical engineering/IT	Industry:	Mechanical engineering, environmental technology
Transfer Activities:	Contract research, services to industry; joint R&D projects; spin-offs	Transfer Activities:	Contract research, services to industry; joint R&D projects; joint supervision of master or PhD theses; exhibition at trade fairs; staff exchange; patents; spin-off
Success:	1 job created	Success:	12 jobs created
Award:	Yes (nationwide)	Award:	Yes (federal state level)
Project S:			
Spatial distance:	339 km		
Transfer Period:	2006 – present		
Industry:	Electrical engineering/IT		
Transfer Activities:	Contract research, services to industry; joint R&D projects		
Success:	9 jobs created		
Award:	No		

Results

Type of Industry

As can be seen from Figure 1, the industries which are targeted by those transfer projects are diverse. However, electrical and mechanical engineering represent two-thirds of the industries targeted in our cases. With respect to the jury's ratings, there is no significant effect of industry on the evaluation of technology transfer projects. Projects that addressed markets with biotechnology or nanotechnology were not particularly rated better than the other projects. Thus, for transfer projects to be seen as promising the industry they mainly target is of secondary importance.

Figure 1: Type of industry

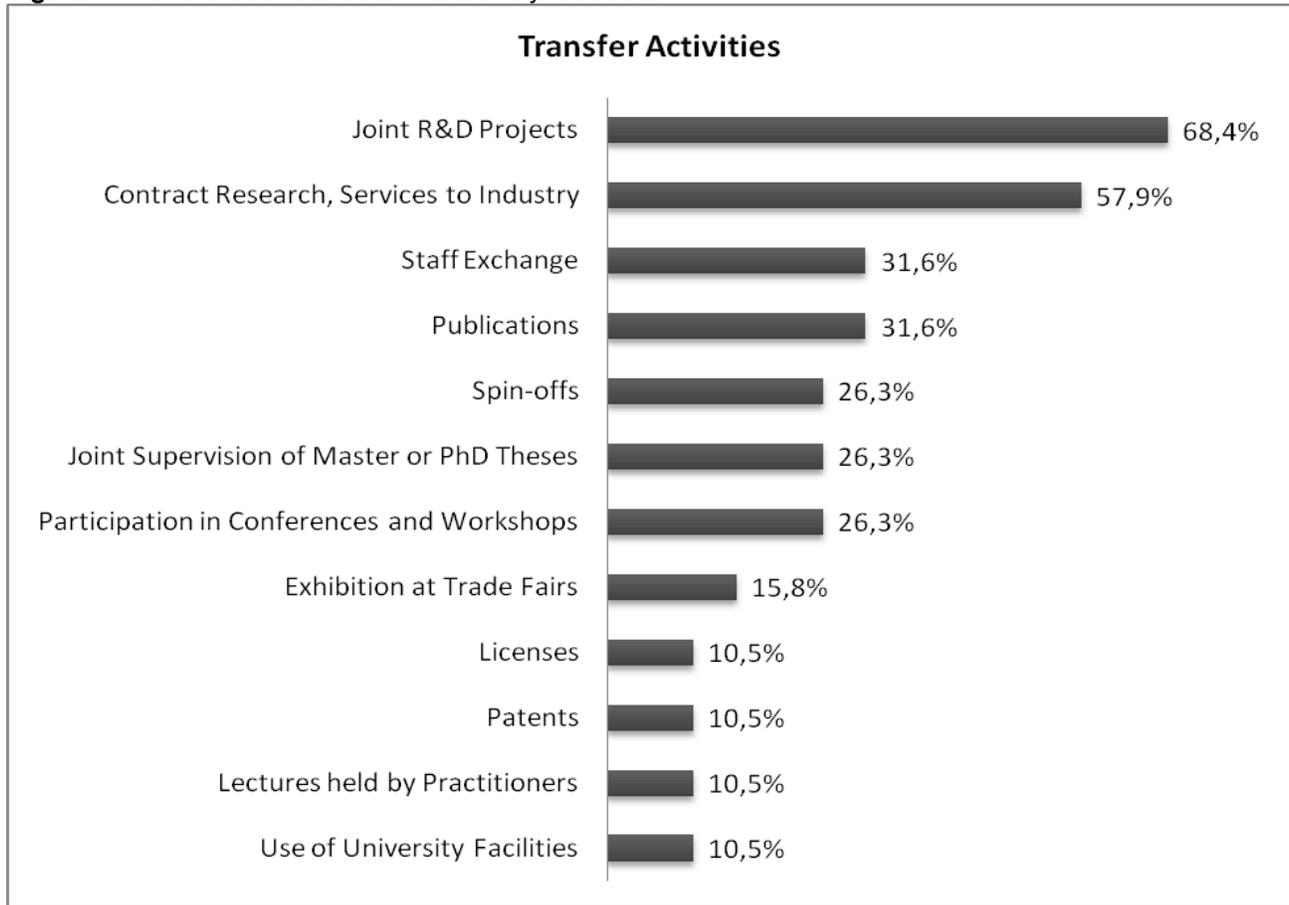


Note: Multiple mentions were possible.

Transfer Activities

To foster university-business co-operation, a broad range of possible activities is frequently named in the literature. This literature highlights that a combination of different transfer activities is useful to increase the success of technology transfer. Even with SMEs as business partners a variety of transfer activities were used in our sample. In total, 12 different activities can be identified (see Figure 2).

Figure 2: Transfer activities used in the analyzed cases



However, the number of activities does not correlate with the jury's rating. An interesting fact is that business experts, in contrast to researchers and representatives of the business-research interface, evaluated those projects better that comprise research co-operations between universities and SMEs with the aim of jointly developing products. In contrast, use of university facilities is seen in a negative manner by business experts. An explanation may be that transfer projects should have their own facilities in order to being independent and more flexible.

Type of Transfer Partner

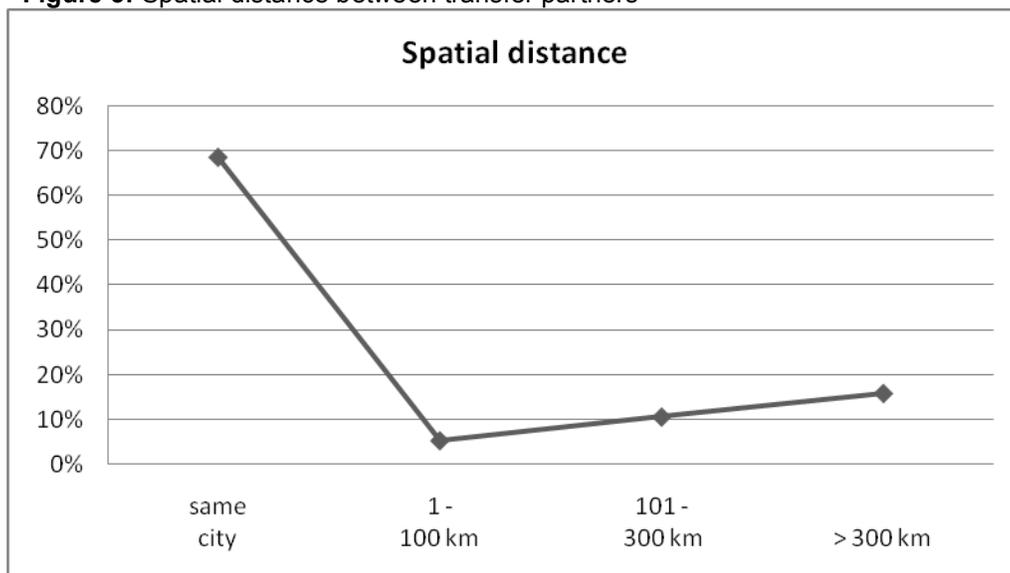
Of the 19 cases, one project contains co-operation of a university with a major enterprise that focused on innovative product development. Eighteen cases are characterized by university-SME co-operation. While in nine cases these SMEs are academic spin-offs, another nine co-operations with established

SMEs, which were not created for the purpose of the respective transfer project, have been done. One of the latter even led to the creation of a new venture as a result of the joint project. The results demonstrate a variety of possibilities for small businesses to successfully deal with academic research and institutions. The high share of established SMEs as partners within the transfer projects is interesting, as it contradicts the argument of Fransman (2008). In his view, academics have a lower incentive to work with established SMEs due to their less sophisticated knowledge base compared to large companies or university spin-offs. We found, however, that established SMEs do have sophisticated knowledge that is of high value to researchers. The jury's evaluation seems to reflect this point, since six out of the nine projects with established SMEs as partners are ranked among the top ten.

Spatial Distance

A factor that may interfere with communication efficiency and thus innovation is the spatial distance between partners involved (Agrawal 2002; Coccia 2008). As can be seen in Figure 3, the cases included in this study seem to underline this reasoning. In most cases, the partners come from the same city or region.

Figure 3: Spatial distance between transfer partners

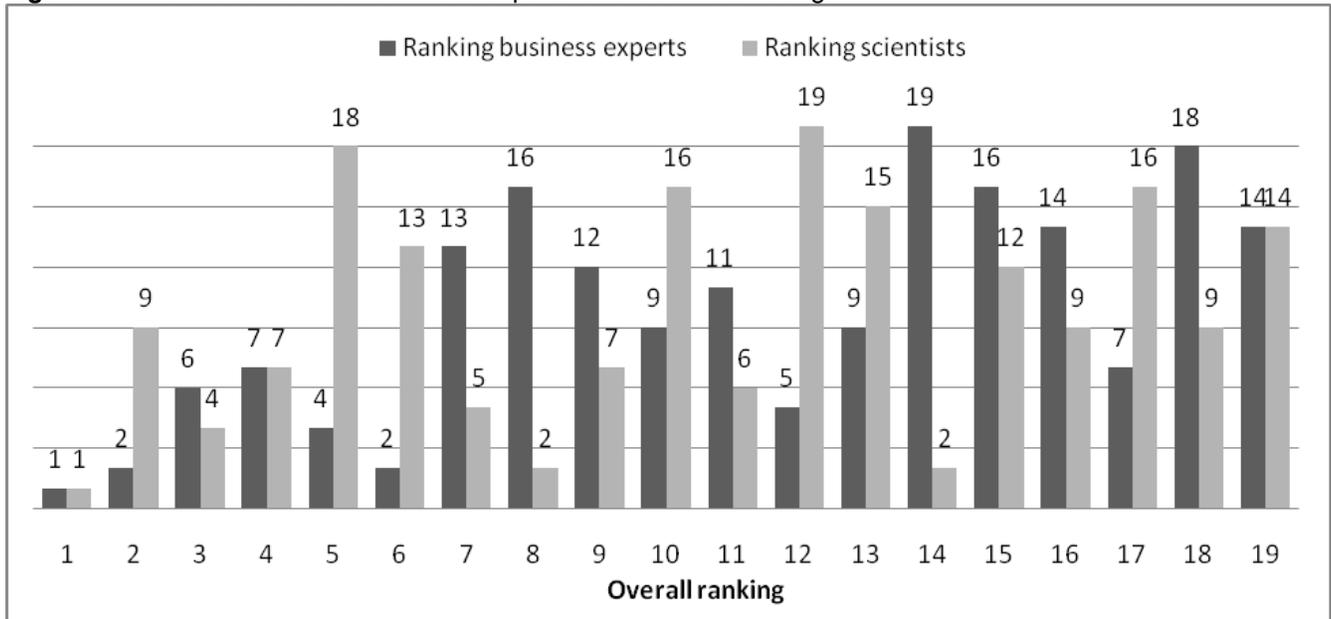


One reason might be the co-operation between universities and academic spin-offs from the same institution. However, partnerships with established SMEs focus on companies from the same region, too. It has to be noted though, that spatial distance has no effect on the raters' judgments. Neither are transfer projects with large distances between partners evaluated more negatively due to supposed difficulties with respect to communication and coordination nor more positively due to a potentially better fit of partners (e.g., the university co-operates with the ideally suited company, irrespective of its location). Considering that today's academic innovations are often highly specialized, universities may think of collaborating with the ideal company in the country or even abroad. As our analyses show, this can be as successful as co-operations within the region. Thus, the results complement prior research that favored the latter option.

Differences Between Stakeholder Perceptions

The previous analyses focused on the transfer projects' characteristics and raters' judgments of these characteristics. As literature suggests, different groups of stakeholders within the transfer process have to be considered. Regarding the results of Siegel and colleagues (2004) particularly the interests of scientists and practitioners seem to be different (see Table 1, p. 4). Hence, the following analysis focuses on the ratings of business experts and scientists. It should be noted that all these jury members have a lot of experience in their field and thus can be perceived as ideal representatives of their respective stakeholder group.

Figure 4: Differences between business experts' and scientists' ratings



A major finding is that ratings of the judges from the different fields vary notably. For example, one project is evaluated second-best by researchers, but last by business experts (see Figure 4). A different one is rated fifth by managers, but last by researchers. In general, evaluations of researchers correlated to a much lesser extent with the mean rating than did those of the managers. Given that most often researchers are the originators and actors of technology transfer projects (Siegel et al. 2004), this holds many risks for successful commercialization.

Interestingly, member ratings of all groups correlate to the same high extent with objective measures like created jobs. Unfortunately, this results mostly occur at an advanced stage of the transfer process. This underlines the importance of the different perceptions before.

Conclusion and Implications

The starting point of the present study was to systematically analyze critical success factors addressed by prior research within a sample of successful technology transfer projects. With the exception of objective criteria (e.g. number of created jobs), no systematic and significant results are identified regarding the characteristics of the different projects. Interestingly, one result contradicts existing literature. In our sample, half of the 19 cases are characterized by linkages between universities and established SMEs. This challenges Fransman's (2008) view in that university members have low incentives to co-operate with small businesses. Notably, these mentioned projects do not only represent a high share of the sample, they also represent six of the top ten projects. These top ratings may be due to a higher probability of market-based innovation (Zhou et al. 2005). In contrast, co-operations with former university spin-offs might rather lead to technology-based innovation.

However, the major finding of our study is that the different motives of the technology transfer stakeholders (e.g., scientists, business representatives) seem to impact on the judgments of the groups. There are notable differences between the ratings of the jury members that represent the respective stakeholders. Given that most often researchers are the originators and actors of technology transfer projects (Siegel et al. 2004), this holds many risks for successful commercialization. This highlights the need for transfer offices with staff that has sufficient experience and understanding regarding business demands. On the one hand, transfer agents should be integrated in the research process as early as possible in order to detect commercial potential. On the other hand, researchers' evaluations of the commercial potential within their work should be aligned with evaluations of business experts in order to avoid development of ideas that do not fit with market needs. Such necessary communication processes need to be organized in a holistic and proactive manner. This calls for institutionalizing the transfer process from the earliest stage within the university system underlining the relevance of

technology transfer offices and their stakeholder-oriented work. A goal-oriented personnel policy is crucial to not only considering business demands but also to actively incorporate SMEs into the transfer process. While successful universities seem to understand their deficits by actively and strategically seeking partners from the industrial sector, the opposite approach is not that common. Colyvas et al. (2002) claim that technology transfer offices are not very effective in bringing inventions to market. Rather, industry actively monitors academic developments. While this may be true for larger companies, we argue that TTOs are necessary for the establishment of links between universities and SMEs. Due to resource constraints, SMEs cannot monitor all developments which may be of interest. Thus, TTOs can act as mediators in this respect if they are established in a transfer-friendly environment (Debackere/Veugelers 2005).

References

- Agrawal, A. (2001): University-to-industry knowledge transfer: literature review and unanswered questions, in: *International Journal of Management Review*, Vol. 3 (4), pp. 285-302.
- Agrawal, A. (2002): Innovation, growth theory and the role of knowledge spillovers, in: *Innovation Analysis Bulletin*, Vol. 4(3), pp. 3-6.
- Arvanitis, S.; Sydow, N.; Woerter, M. (2008): Is there any Impact of University–Industry Knowledge Transfer on Innovation and Productivity? An Empirical Analysis Based on Swiss Firm Data, in: *Review of Industrial Organization*, Vol. 32 (2), pp. 77-94.
- Bach, L.; Llerena, P. (2007): Indicators of higher-education institutes and public-research organizations technology transfer activities: insights from France, in: *Science and Public Policy*, Vol. 34 (10), pp. 709-721.
- Bekkers, R.; Bodas Freitas, I. M. (2008): Analysing knowledge transfer channels between universities and industry: To what degree do sectors also matter?, in: *Research Policy*, Vol. 37 (10), pp. 1837-1853.
- Coccia, M. (2008): Spatial mobility of knowledge transfer and absorptive capacity: analysis and measurement of the impact within the geoeconomic space, in: *Journal of Technology Transfer*, Vol. 33 (1), pp. 105-122.
- Cohen, W. M.; Levinthal, D.A. (1989): Innovation and learning: the two faces of R&D, in: *The Economic Journal*, Vol. 99 (397), pp. 569-596.
- Cohen, W. M.; Levinthal, D.A. (1990): Absorptive capacity: a new perspective on learning and innovation, in: *Administrative Science Quarterly*, Vol. 35 (1), pp. 128-152.

- Cohen, W. M.; Nelson, R. R.; Walsh, J. P. (2002): Links and Impacts: The Influence of Public Research on Industrial R&D, in: *Management Science*, Vol. 48 (1), pp. 1-23.
- Debackere, K.; Veugelers, R. (2005): The role of academic technology transfer organizations in improving industry science links, in: *Research Policy*, Vol. 34 (3), pp. 321-342.
- Fransman, M. (2008): Disaggregating Firms In Analysing The Costs And Benefits Of The University-Industry Relationship: Based On An Analytical And Empirical Study From Scotland, in: *Economics of Innovation and New Technology*, Vol. 17 (1-2), pp. 123-136.
- Fritsch, M.; Slavtchev, V. (2007): Universities and Innovation in Space, in: *Industry and Innovation*, Vol. 14 (2), pp. 201-218.
- Kodama, T. (2008): The role of intermediation and absorptive capacity in facilitating university-industry linkages-An empirical study of TAMA in Japan, in: *Research Policy*, Vol. 37 (8), pp. 1224-1240.
- Krugman, P. (1991): *Geography of trade*, Cambridge: MIT Press.
- Schartinger, D.; Rammer, C.; Fischer, M. M.; Fröhlich, J. (2002): Knowledge interactions between universities and industry in Austria: sectoral patterns and determinants, in: *Research Policy*, Vol. 31 (3), pp. 303-328.
- Schumpeter, J. A. (1934): *The Theory of Economic Development*, Harvard University Press, Cambridge, MA.
- Siegel, D. S.; Waldman, D. A.; Atwater, L. E.; Link, A. N. (2004): Toward a model of the effective transfer of scientific knowledge from academicians to practitioners: qualitative evidence from the commercialization of university technologies, in: *Journal of Engineering and Technology Management*, Vol. 21 (1-2), pp. 115-142.

Siegel, D. S.; Veugelers, R.; Wright, M. (2007): Technology transfer offices and commercialization of university intellectual property: performance and policy implications, in: Oxford Review of Economic Policy, Vol. 23 (4), pp. 640-660.

Zhou, K. Z.; Yim, C. K.; Tse, D. K. (2005): The Effects of Strategic Orientations on Technology- and Market-Based Breakthrough Innovations, in: Journal of Marketing, Vol. 69 (April), pp. 42-60.

The Influence of Sustainability Orientation on Entrepreneurial Intentions – Investigating the Role of Business Experience*

by Marcus Wagner and Andreas Kuckertz

Do individuals who are concerned by issues of sustainability also exhibit strong entrepreneurial intentions? Given that existing imperfections in the market create numerous opportunities for entrepreneurship connected with sustainable development, adding individual sustainability orientation to models of entrepreneurial intention could increase their explanatory power. Based on survey data collected from students and alumni of a German technical university, we provide evidence that entering sustainability orientation into the equation is actually meaningful. However, our findings suggest that the positive impact of sustainability orientation vanishes with business experience. Consequently, we suggest measures to nourish an evidently existing potential for sustainable entrepreneurship.

Introduction

Entrepreneurship is usually associated with numerous promises. From a policy-makers vantage point, entrepreneurial behavior of economic actors within an economy is supposed to increase the competitiveness of that economy in global markets while at the same time potentially creating new employment opportunities. From the perspective of an individual entrepreneur, exploiting entrepreneurial opportunities can be attractive because such opportunities bring with them the promise of a meaningful career and the potential of harvesting superior entrepreneurial rents.

The emerging stream of academic literature on sustainable entrepreneurship¹ adds a new dimension to this promise. Not only is entrepreneurship for sustainable development supposed to

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¹ As in prior literature (e.g. Dean and McMullen 2007; Cohen and Winn 2007; Schaper 2005) we make use of the shorthand term sustainable entrepreneurship even though it would be more precise to refer to entrepreneurship for sustainable development. This is because sustainable entrepreneurship could be understood too narrowly as referring to entrepreneurial activities aimed at creating sustained competitive advantage. In principle, all entrepreneurial activities can foster or hinder sustainable development, which is why we do not talk of sustainable development-related entrepreneurship. When we use the term of sustainable entrepreneurship in the remainder of this paper, we refer only to those entrepreneurial activities, which contribute positively to sustainable development and the objectives derived from it.

result in economic success. Sustainable entrepreneurs manage to the “triple bottom line” (Elkington 1997), in other words they balance economic health, social equity and environmental resilience through their entrepreneurial behavior. Sustainable entrepreneurship is thus not only associated with the promise of more traditional concepts of entrepreneurship, but also has additional potential both for society and the environment. Against this background, the recent upsurge of writing in this field is far from surprising. The topic of entrepreneurship for sustainable development lies at the nexus of innovation, sustainability concerns and entrepreneurship and has emerged as an intensively debated subject moving increasingly from journals focused on environmental management (e.g. Schaltegger 2002) to mainstream business and entrepreneurship journals (e.g. Cohen and Winn 2007; Dean and McMullen 2007). The phenomenon itself, however, is far from being a new one; history provides numerous examples of entrepreneurs pursuing sustainable business models as early as the 19th century (Anderson and Leal 1997). Yet, due to its emergent character, to date most contributions have naturally remained conceptual or have reported results of case study research (e.g. Schaltegger 2002). In light of the topic’s importance and potential, we believe that it is time to move to the application of more rigorous research designs and that the discussion of sustainable entrepreneurship will benefit from the development of large-scale empirical research projects.

It is this gap in the literature that our paper addresses in one important aspect. In particular, we are interested in individuals who are extremely concerned with environmental and societal issues, those who are sustainably oriented and thus should be interested in pursuing initiatives and forming businesses that support the idea of sustainability. In other words, we aim to answer the question of how sustainability orientation and entrepreneurial intentions are related in practice. Could it be that sustainability orientation adds to our understanding of entrepreneurial intentions and if so, what would be the consequences for entrepreneurship policy and entrepreneurial education? Therefore, we analyze the linkages between sustainability orientation amongst university students and their respective entrepreneurial intentions, since with this particular group goes a huge potential for educators to produce future entrepreneurs in environmentally and socially more sustainable fields of enterprise.

To do so, the paper proceeds along the following lines. First, we review the extant literature on sustainable entrepreneurship and entrepreneurial intentions with a specific focus on entrepreneurial education. Based on this literature review we derive two hypotheses that will be tested with empirical data collected from 357 students and 162 alumni from science and engineering degree programs at one of Germany’s most reputable technical universities. We essentially use statistical methods and econometric models well established in the entrepreneurship field to put our hypotheses to a rigorous test. After reporting our results, the findings are discussed together with their implications for entrepreneurship policy and entrepreneurship education.

Theoretical Background

Sustainable entrepreneurship

Environmental and societal issues today are overabundant. For instance, the potentially negative consequences of global warming are widely accepted, many industrialized countries are experiencing mass unemployment or wrestling with the challenges resulting from an increasingly globalized economy and society. Many of these challenges could be attributed to negative externalities or other phenomena described in the classical economics literature, such as the tragedy of the commons (Hardin 1968). Sustainable behavior, or in short sustainability, is a

paradigm, that can function as a reference point for the development of solutions to today's environmental and societal challenges. The Brundtland Commission, brought into being by the United Nations in the early 1980s, defined sustainability as meeting "the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development 1987: 54).

One solution to achieve this goal has been, and of course still is, government intervention. However, Coase (1974) in his classic example of the provision of lighthouses for maritime shipping, pointed out that in the past the private supply of services has proved possible even in areas that were previously believed to be only serviceable by public authorities. As government intervention does not necessarily need to be the only answer to environmental and societal challenges, the role of private economic actors comes to prominence. Many researchers have therefore explored the general link of overall economic behavior, management and sustainability (e.g. Aragon-Correa and Sharma 2003; Hall and Vredenburg 2003; Lenox 2006). From the perspective of entrepreneurship research, researchers have pointed to how concepts of entrepreneurship theory can inform us about sustainable economic behavior. In particular, we will show that the concept of entrepreneurial opportunities (Kirzner 1985; Venkataraman 1997; Shane and Venkataraman 2000) has turned out to be extremely fruitful.

The early literature on sustainable entrepreneurship has often dealt exclusively with environmentally oriented entrepreneurship (Staber 1997; Keogh and Polonsky 1998; Pastakia 1998; Isaak 1999; Schaltegger 2002; Linnanen 2002; Walley and Taylor 2002; Lehmann et al. 2005; Schaper 2005) and underlines, for instance, that so-called envirocapitalists "are entrepreneurs using business tools to preserve space, develop wildlife habitat, save endangered species, and generally improve environmental quality" (Anderson and Leal 1997: 3). Other contributions to the field focus primarily on the social aspect of sustainable entrepreneurship (Brinckerhoff 2000; Borzaga and Solari 2001; Prahalad and Hammond 2002; Mair et al. 2005; Prahalad 2005; Prahalad 2006; Bright et al. 2006; Milstein et al. 2006; Desa and Kotha 2006; Nicholls 2006). For example, some authors propose typologies of eco-entrepreneurship (e.g. Schaltegger 2002), distinguishing it from other forms of corporate environmental management activity. Similarly, Isaak (1999) separates incumbent firms that become incrementally more environmentally concerned, from entrants providing environmentally benign products and services using environmentally friendly processes from the inception of their business operations. Writings in the social entrepreneurship literature, on the other hand, focus primarily on how to provide club goods to members or on how to provide access to innovation for specific deprived market segments (Desa and Kotha 2006), especially in the context of bottom-of-the-pyramid innovation in emerging markets and developing economies (Prahalad 2005; Prahalad 2006). Moreover, the social entrepreneurship literature is also concerned with case analyses of successful non-profit social ventures (e.g. Desa and Kotha 2006) and the effect of globalization on opportunities for social entrepreneurship (Zahra et al. 2008).

What is notable about these classifications (e.g. Linnanen 2002; Walley and Taylor 2002) is, however, the absence of the dimension of innovativeness (e.g. radical versus incremental or original versus imitation) which seems to be of considerable relevance for entrepreneurial rents as well as opportunity realization. The recent literature on sustainable entrepreneurship has consequently attempted to integrate environmental and social aspects (Larson 2000; Kyrö 2001; Cohen 2006), and simultaneously links the process of entrepreneurship (Bhave 1997) to the concept of opportunity recognition that is in numerous respects closely related to innovativeness (Buttner and Gyskiewicz 1993).

For instance, building on Venkataraman's (1997) definition, Cohen and Winn define research on sustainable entrepreneurship as the investigation of "how opportunities to bring into existence 'future' goods and services are discovered, created, and exploited, by whom, and with what economic, psychological, social, and environmental consequences" (2007: 35; italics in original). Dean and McMullen take up a similar position; however, they highlight the necessity of adopting a process perspective (Brazeal and Herbert 1999) with their definition of sustainable entrepreneurship as "the process of discovering, evaluating, and exploiting economic opportunities that are present in market failures which detract from sustainability, including those that are environmentally relevant" (Dean and McMullen 2007: 58.).

Despite clearly defining the field, recent writings have in addition linked sustainable entrepreneurship to market imperfections and in doing so, have provided a much more systematic categorization of entrepreneurial opportunities that simultaneously contribute to sustainable development. Isaak (1999) and Pastakia (1998) mention the reduction of negative (environmental) externalities as a defining criterion for environmentally oriented entrepreneurship. In essence, authors from this school argue that specific market failures are the underlying root cause for entrepreneurial activities aimed at realizing social objectives as well as environmental improvements (Cohen and Winn 2007; Dean and McMullen 2007; Cohen et al. 2008) and bring with them huge economic potential. Some even postulate a correlation between the extent of market failure and the economic promise resulting from the related opportunity to alleviate this market failure (Dean and McMullen 2007).

The review of extant work reveals that the literature on entrepreneurship for sustainable development has grown quantitatively over time. Whilst it has been published more frequently in mainstream business journals and has become more accommodating qualitatively, it still has not fully integrated the extensive literature on conventional entrepreneurship. In particular, there exists a large theoretical, conceptual and empirical body of work dealing with the factors that determine entrepreneurial behavior and intentions, such as attitudes, education or situational aspects. It is this literature we will link to entrepreneurship for sustainable development in the subsequent paragraphs.

Sustainability concerns and entrepreneurial intentions

The literature review so far suggests that entrepreneurship for sustainable development holds a bold promise, namely, that because entrepreneurial opportunities exist which are caused by market imperfections, individuals will pursue these in the expectation of entrepreneurial rents. However, the literature could also lead one to the assumption that entrepreneurially minded individuals will pursue exactly those opportunities from which they expect the highest rents to be extractable. The question immediately arises, as to whether the entrepreneurial opportunities that are based on market imperfections are identical to those that promise the highest entrepreneurial rents. One could argue that given the large number of market imperfections still existing with regard to the environment and social conditions, based on revealed preferences, the answer is no. More specifically, this holds true for a number of environmental fields. For example, the case of energy efficiency perfectly illustrates how inefficiencies persist, even though their removal would be profitable – yet not profitable enough to be preferred in the light of other investment opportunities with higher returns (e.g. Jaffe and Stavins 1994; Sanstad and Howarth 1994).

Against the background of entrepreneurship training, students of business administration and economics in particular should be very likely to focus on maximizing entrepreneurial rents, given that maximization concepts are at the heart of their education (Frank et al. 1993; Ghoshal

2005). However, whilst the energy saving opportunities given above as an example may not maximize rents, those opportunities with great(er) sustainability benefits could be profitable and hence could interest a potential entrepreneur with sustainability interests. For such sustainable development-oriented entrepreneurs (defined more generally as those individuals with entrepreneurial intentions who aim to manage a “triple bottom line”), harvesting entrepreneurial rents is most likely not the only aim and this at least in theory leaves open the possibility of ‘satisficing’ behavior (Simon 1956: 129) implying pursuance of opportunities with more limited profitability yet higher sustainability benefits. Even in a utility maximization framework such behavior of entrepreneurs could be explained in that non-monetary benefits could be a significant element of the entrepreneurs’ utility function, their discounted expected life-cycle utility (Pfeiffer and Reize 2000; Wagner 2005). For example, existence and option values are well-established non-use values in environmental cost-benefit analysis (Willis 1989; Hanley and Spash 1992). Hence knowing that for instance pursuance of a specific entrepreneurial opportunity could help reduce carbon dioxide emissions and in turn assist in preserving tropical rainforests, could lead to a higher overall utility to a sustainable development-oriented entrepreneur than choosing an opportunity that only maximizes the economic rents.

Therefore, with respect to entrepreneurship educators, the question of what could be done to foster entrepreneurial intentions, targeted not only at the conventional, but also at opportunities related to sustainable development, is of utmost importance. Given that intentions are the single most important predictor of actual behavior (Ajzen and Fishbein 1977; Souitaris et al. 2007), studying the antecedents of entrepreneurial intentions especially among students has garnered considerable attention among entrepreneurship researchers recently (e.g. Krueger et al. 2000; Lüthje and Franke 2003, Souitaris et al. 2007). An early answer to the question of what factors affect entrepreneurial intentions has been offered by the traits approach, in other words, entrepreneurial intentions and behavior were ascribed solely to the personality of the individual (for a recent review of this early literature see Baum et al. 2007). Antecedents such as self-efficacy, risk-taking propensity or optimism were identified (Arabsheibani et al. 2000; Stewart and Roth 2001; Fraser and Greene 2006; Rauch and Frese 2007); however, against the background of many inconsistent findings wide criticism of this approach arose (Gartner 1988; Keh et al. 2002; Mitchell et al. 2002). As entrepreneurial phenomena occur in different contexts and in close interaction with other individuals and the environment (Robinson et al. 1991), explanations based merely on the personality of the individual produce a somewhat reductionist impression. Consequently, based for instance on the theory of planned behavior (Ajzen 1991), contextual factors have been integrated into recent models of entrepreneurial intentions (Krueger et al. 2000; Lüthje and Franke 2003). Lüthje and Franke (2003) are able to show that in the context of entrepreneurship education such contextual factors should be differentiated into perceived barriers to entrepreneurship, and perceived support for entrepreneurship. Souitaris et al. (2007) report similar results, while at the same time they stress the point that inspiration by educators and successful entrepreneurs will result in a higher level of entrepreneurial intention among students.

With respect to sustainable entrepreneurship we propose that it makes sense to add a further variable into the equation, i.e. an individual’s sustainability orientation, given that an individual’s interests (DiMaggio 1988) are important to understand the emergence of organizations. The reason for doing so is based on the specific definition of sustainable entrepreneurship suggested by Dean and McMullen (2007) that closely linked existing market imperfections to entrepreneurial opportunities. From a conservative viewpoint, the solution to

market imperfections with (potentially) detrimental environmental and social effects would call for intensified government intervention. The advent of more and more non-governmental organizations (NGOs) trying to exert political pressure on policy makers stands in this tradition (Oppenheimer 2006) – individuals who are highly involved in questions of sustainability naturally get involved with NGOs holding corresponding views. For instance, empirical research shows that people with deep environmental concerns have a higher desire to express these values by acting according to their values and engaging in voluntary action (Bruyere and Rappe 2007). If, however, market imperfections are not just issues to be resolved by policy-makers, but are part of an area to be simultaneously associated with entrepreneurial opportunity (Cohen and Winn 2007; Dean and McMullen 2007), we have reason to believe that sustainability-oriented individuals will not only engage in political activism, but will also have a higher propensity to perceive entrepreneurial opportunities resulting from unsustainable economic behavior. This is due to the fact that the perception of specific entrepreneurial opportunities depends on prior individual knowledge (Shane 2000). Opportunities for sustainable entrepreneurship therefore are not readily observable by everyone or might not even be perceived as opportunities (Zahra et al, in press). The example of the founder of Ecotricity, a British green energy entrepreneur specializing in wind power, illustrates this aspect. Prior to starting various sustainable ventures, Ecotricity's founder spent many years as a travelling activist and peace campaigner, so, in this particular case, before personal sustainability concerns translated into economic behavior, the personal dedication to a cause was targeted at more traditional kinds of political grassroots activities. The case illustrates that even if not all opportunities for sustainable entrepreneurship (Bennett 1991; Berle 1991) are related to superior entrepreneurial rents, sustainability oriented individuals will a) perceive a higher number of such opportunities and b) show a stronger intent to act upon such opportunities, given that these are not only associated with entrepreneurial, but with environmental and/or social rents as well. Accordingly:

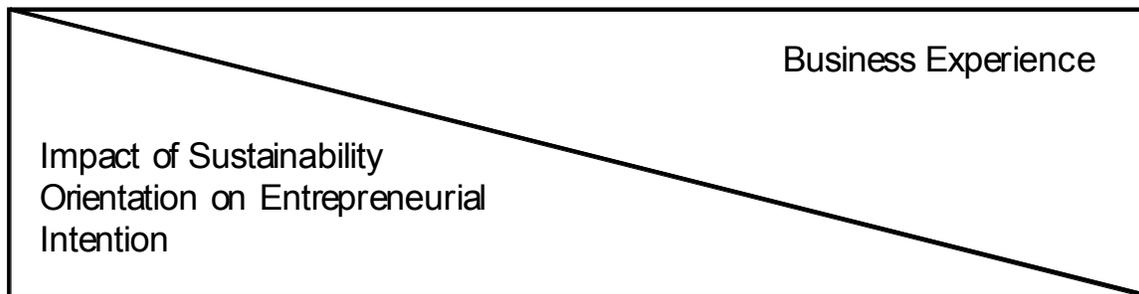
H1: There will be a positive relationship between individuals' sustainability orientation and their entrepreneurial intention.

In light of the literature on values and ethical beliefs of students, there are reasons to assume that this positive impact of sustainability orientation on entrepreneurial intention does not hold true in all contexts. Placing students and business people on an experience continuum from comparatively inexperienced (e.g. undergraduate students) to comparatively experienced (e.g. middle managers or entrepreneurs) with respect to their business experience the level of sustainability orientation is likely to decline, and thus its impact on entrepreneurial intention as well (Figure 1). In other words: Business experiences cause the positive influence of sustainability orientation to vanish over time.

This notion becomes clear in view of two streams of literature. First, empirical studies examining the ethical values and sustainability concerns of students have found that undergraduate business students exhibit less concern for the environment and a lower tendency to behave in an environmentally friendly manner, compared to non-business students (Benton 1994). At the same time, undergraduate students generally differ from more experienced MBA students, who usually can draw upon considerable work experience, in their perception of ethical beliefs (Parsa and Lankford 1999) in that the former exhibit a higher tendency to act more ethically. Furthermore, comparing business students and managers from the service sector in terms of their perception of ethics and social responsibility results in significant differences as

well; in particular students seem to be more concerned with questions of ecology than managers (Kraft and Singhapakdi 1991). Placing these four groups (non-business students, undergraduate business students, MBA students, and managers) on the business experience continuum thus apparently goes along with a strong decline in ethical concerns, of which concerns for sustainable development-oriented behavior are a clear sub-category.

Figure 1
The Effect of Business Experience on the Relationship of Sustainability Orientation and Entrepreneurial Intention



A similar phenomenon can be observed in the context of environmental and sustainability-related concerns and actions in society at large. For instance, studies regularly conducted on behalf of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU 1998; BMU 2000; BMU 2002) suggest that the larger part of the population has considerable environmental concerns, but only a small minority acts upon them. The reasons that qualitative research provides for this pattern (manifested e.g. in terms of considering it important to save resources, but not participating in recycling schemes or in terms of citizens feeling that trade should be fair between poorer and richer countries, but not willing to pay a premium for fair trade products) seem quite similar to those explaining experienced business peoples' lower ethical concerns, and can thus help to shed light on the underlying mechanisms that explain this effect of greater experience (Diekmann and Preisendörfer 1991). They relate to the increased complexity of action in a social environment, to contradicting demands, to limited cognitive resources and bounded rationality, factors that have also been found to be important in the context of consumer behavior with regard to environmental impacts and as concerns the behavior of employees particularly in smaller firms (Dembkowski and Hamner-Lloyd 1994; Tilley 1999).

Second, results from the opportunity recognition stream of the entrepreneurship literature suggest that – learning from experience – optimism diminishes among entrepreneurs (Fraser and Green 2006). In other words: Learning about the facts of business causes entrepreneurs to evaluate entrepreneurial opportunities more rigorously; the number of opportunities that are perceived (Shane 2000) and considered viable at the same time, will thus decline with business and entrepreneurial experience, including the perceived opportunities for sustainable entrepreneurship. This is the case because opportunities for sustainable entrepreneurship are likely to be associated with a reduced level of legitimacy given their inherent innovativeness, making their realization potentially more challenging than the realization of more conventional opportunities. Several researchers (e.g. Starr and Macmillan 1990; Aldrich and Fiol 1994;

Zimmerman and Zeitz 2002; Delmar and Shane 2004) have argued that a venture's legitimacy, as perceived by key stakeholders, would be an essential resource to overcome a venture's liabilities of newness (Stinchcombe 1965), since pursuing a legitimate business model allows easier acquisition of other crucial resources (Dowling and Pfeffer 1990). Given that opportunities for sustainable entrepreneurship are likely to bring in their wake radical changes of the dominant design within any given industry, we expect the link of sustainability orientation and entrepreneurial intentions to be weakened by business experience, as experienced business people will be more aware than the inexperienced of the challenges that accompany pursuing such opportunities. All in all, we interpret these findings as indicators of an increasing emphasis that individuals place on the viability of opportunities for sustainable entrepreneurship, that is to say, with increasing business experience, a form of "reality check" takes place that leads to favoring harvesting entrepreneurial rents over other forms of benefits. We therefore propose:

H2: The positive relationship between an individual's sustainability orientation and entrepreneurial intention will be stronger for individuals inexperienced in business matters (such as students) than for experienced individuals (such as individuals who have finished their studies and/or have post-degree work experience).

Methods

Data

This study is based on a sample of students and alumni of science and engineering degree programs at the Technical University of Munich (TUM), one of Germany's largest and most reputable technical universities. We consider this sample to be particularly suitable to illustrate the hypothesized diminution effect of business experience on the relationship of sustainability orientation and entrepreneurial intention, given that engineering and science students are usually not trained in economics and are therefore not familiar with concepts such as profit maximization. Hence, a focus on pure rent seeking, which may be in conflict with sustainability-oriented aims is extremely unlikely among this population. On the other hand, alumni of these programs have had the chance to gain considerable business experience, for instance from positions in industrial engineering or from contact with people in pure business functions.

Since June 2006 and prior to our main survey, pre-tests were carried out with alumni and students to ensure that the scales for the constructs used in our empirical analysis are valid and reliable. Whilst we largely use tested scales and constructs, we ensured through these pre-tests that these were also well understood and usable amongst our target population. For the survey, we used a web-based online questionnaire and contacted students through the mailing lists of a large number of courses taking place in the 2007 summer semester and the 2007/2008 winter semester. Whilst the total number of students participating in these courses is smaller than the target population of all students of science and engineering degree programs, this problem of reduced coverage is not critical since we also put information about the survey on the homepage of the TUM student portal. This portal is regularly accessed by all science and engineering students of TUM. To contact TUM alumni of science and engineering degree programs and to invite them to participate in the survey, we used the official alumni mailing list of TUM. For students, a first invitation to participate in the survey was sent out mid-2007 followed by a reminder 10 days later. Subsequently, an invitation was sent to more students late in 2007, followed by a reminder at the end of 2007 and another one a month later at the beginning of 2008. The responses received as a result of all mailings yielded a response rate of 14.4%

(corresponding to 357 student responses) which is acceptable for this type of survey. For the alumni, a first invitation was sent out in 2007 by e-mail. This was followed up with a reminder to an updated and extended list of alumni three weeks later. The responses received through these two mailings correspond to a response rate of 14.7% (equaling 162 responses from alumni) which is deemed satisfactory for this type of survey.²

Even though a response rate of approximately 15% in both sub-samples can be considered acceptable, self-assessment and self-exclusion of respondents may be a cause of distortions in the data set, in particular common method, common source and non-response bias. Common method bias results from variance in the data being more attributable to a measurement method than to the constructs measured (Podsakoff et al. 2003). Notably, the extent of common method bias varies between disciplines and is below average in the fields of marketing and business (Cote and Buckley 1987). In addition, self-assessment or soliciting data on independent or dependent variables does not in itself imply the existence of common method bias, since its strength can vary amongst sub-groups of respondents (e.g. respondents from different degree programs or student as against alumni respondents) and since method-related variance can deflate or inflate the relationships observed (Cote and Buckley 1987; Podsakoff et al. 2003). For the survey data used here, a number of steps were taken (both procedurally and statistically) to ensure that common method bias is minimized.

Procedurally, the study used different response formats, ensured the anonymity of respondents and that question order was counter-balanced and scale items were improved, especially throughout the pre-test phase of the survey. All of these steps were aimed at reducing socially desirable responses and item ambiguity. For the sake of the anonymity of respondents, it was not possible to employ other procedural remedies, such as separating measurements. However, the design of the web-based survey allowed respondents to store a partially completed survey and to continue its completion at a later time, so that in principle, even this last remedy could be applied by respondents. In terms of statistical ex post evaluation of the presence of common method bias in the data finally used in the analysis, Harman's single-factor test (Harman 1967; Podsakoff et al. 2003) was used to establish whether one single factor could be identified as accounting for most of the variance in the data from the unrotated solution of a factor analysis. The principle rationale behind this procedure is that if common method or source bias were an issue, then a factor analysis would yield a single factor or one clearly dominant factor accounting for the largest share of variance in the data. Since conducting this test did not result in a strong first factor, neither common method, nor common source bias seem to be a critical issue in the data in terms of both ex ante procedural precautions and ex post statistical evidence. We therefore consider it safe to continue with the analysis, even though the dependent and independent variables were collected at the same time with the same measurement instrument.

Turning to potential non-response bias, it could be possible that the replies received contain a disproportionate number of individuals that are particularly concerned about sustainability. Such a bias is a frequent problem of surveys based on written questionnaires (Armstrong and Overton 1977), and similar issues could be expected for web-based surveys. However, there is broad variability in the responses, indicating that the data also includes many individuals less concerned about sustainability. Further, the framing of the survey did not point to any particular relevance of the questions related to sustainability concerns.

² The sample sizes for the analysis to follow are slightly reduced since not all students and alumni responded to all questions.

Table 1
Descriptive statistics and correlations (N=438)

Variables	Mean	Std. Dev.	Min.	Max.	1	2	3	4	5	6	7	8	9	10	11	VIF
1 Gender	1.259	.438	1	2												1.35
2 Age	25.060	6.646	17	48	-0.185											1.77
3 Studies abroad	0.108	0.310	0	1	-0.003	0.135										1.18
4 Placement abroad	0.135	0.342	0	1	-0.050	0.270	0.230									1.24
5 Vocational training	1.886	0.319	1	2	0.015	-0.191	-0.014	0.079								1.21
6 Parents self-employed	0.309	0.463	0	1	0.024	-0.061	0.024	0.026	-0.055							1.09
7 Sustainability orientation	3.970	0.669	1	5	0.043	0.093	0.027	-0.006	-0.113	-0.084						1.16
8 Propensity to innovate	2.611	0.536	1	4	0.039	0.058	0.031	0.007	-0.021	-0.029	0.055					1.22
9 Attitudes to entrepreneurship	2.747	0.822	1	4	-0.171	0.118	0.026	0.089	0.021	0.072	-0.009	0.122	0.130			1.23
10 Perceived support	3.079	0.582	1	4.5	-0.023	-0.165	-0.015	-0.063	0.094	0.036	0.066	0.072	0.089	0.122		1.19
11 Perceived barriers	3.400	0.635	1	5	-0.042	0.038	-0.042	-0.038	0.017	0.009	0.093	-0.101	-0.133	0.015	-0.020	1.07

Note: Correlations with an absolute value greater than 0.05 are significant at $p < 0.05$; associations between categorical variables are calculated using Cramer's V.

Since non-respondents are usually assumed to be more similar to late respondents than to early respondents, both the student sample and the alumni sample were – following recommendations set forth by Homburg and Bucerious (2006) – divided into thirds according to the time between initial contact and completion of the questionnaire. The comparison revealed no significant differences; hence we did not find any indication of non-response bias in the data. Table 1 provides an overview of the descriptive statistics, correlations and variance inflation factors (VIF) of the data. Prior to our analysis, we ensured that our data conformed to the assumptions required for regression analysis. We checked the VIFs for evidence of multicollinearity; yet their numerical values were all well below the cut-off value of 10 suggested by Neter et al. (1996). This assures us that multicollinearity is not a problem with the data at hand. We also tested for heteroskedasticity, but found no evidence for this on the basis of the Breusch-Pagan / Cook-Weisberg test statistic ($\chi^2(1) = .78, p = .18$).

Measures

The main measures used in the survey are sets of items to measure traits such as sustainability orientation, personal attitudes towards entrepreneurial activities, and an individual's originality and innovativeness, as well as items reflecting contextual factors such as perception of barriers and support factors for entrepreneurial activities. Moreover, a number of demographic and control variables, such as age, gender, whether the respondent's parents are or have been self employed, and the specific degree course studied by the respondent were included. Sustainability orientation was measured through items rated on a 5-point scale ranging from not at all accurate to very accurate. Given no established definition exists of such sustainability orientation, we had to derive our own items based on the literature reviewed from the fields of environmental psychology, environmental and social entrepreneurship and sustainability management. Based on a synthesis of these streams of literature we operationalized sustainability orientation by means of six items referring to environmental protection and social responsibility. We argue that these items essentially reflect underlying attitudes and convictions and provide a link between those and entrepreneurial intention focused on sustainable development to be expected by the individual expressing them to a high degree. Our items are "German firms should take an internationally leading role in the field of environmental protection", "Firms that are environmentally oriented have advantages in recruiting and retaining qualified employees", "The environmental performance of a company will in future be considered more and more by financial institutions", "Corporate social responsibility should be part of the foundations of each company", "I think that environmental problems are one of the biggest challenges for our society" and "I think that entrepreneurs and companies need to take on a larger social responsibility". Given that Cronbach's α is over 0.64 for these six items, we calculate one index of sustainability orientation based on them.³

Attitude towards self-employment is featured prominently in the entrepreneurship literature as a determinant for entrepreneurial activity of individuals (see e.g. Hisrich et al. 2007). We therefore include items to measure this construct by means of a 5-point scale ranging from strong agreement to strong disagreement. The items used to operationalize this attitude are "I'd rather be my own boss than have a secure job", "You can only make big money if you are self-employed" and "I'd rather found a new company than be the manager of an existing one".

³ An alpha value of 0.6 is deemed appropriate for sufficient reliability of exploratory or new constructs (Peterson 1994) as it is the case in this study.

Cronbach's α of an index constructed of these items is 0.65.

To measure originality and an individual's propensity to innovate, we recur to the well-known Kirton-Adoption-Innovation (KAI) index (Kirton 1976 2003; Marcati et al. 2008; Bagozzi and Foxall 1995). Various studies have confirmed the KAI inventory's relevance (cf. Taylor 1989a for applications in the human resources context and Bobic et al. 1999 for an application in the entrepreneurship context). Whilst a unidimensional version of the index has been proposed based on the original 32-item version of the KAI index, it is now generally accepted that its items load on three factors in the abridged 13-item version commonly used today (Foxall and Hackett 1992; Taylor 1989b; Marcati et al. 2008). The first of these, termed originality, describes how comfortable a person is with new ideas, whereas the second and third (termed efficiency and conformity) refer to Weberian and Mertonian concepts of bureaucracy and meritocracy. Each item of the KAI index is measured on a 5-point scale ranging from 1 (strong disagreement) to 5 (strong agreement). We confirm these three factors in our samples based on principal component analysis but given our focus on entrepreneurial intention, we use only the first factor of the KAI index in our empirical analysis to operationalize an individual's propensity to innovate. Cronbach's α for the index constructed on the basis of those items that load on the first KAI factor is 0.77, thus indicating good reliability.⁴

A broader set of contextual factors has been proposed in the literature to influence the intention to become self-employed (Pennings and Kimberly 1997; Naffziger et al. 1994; Chrisman et al. 2005). Franke and Lüthje (2003) carried out an exhaustive analysis of such factors in qualitative interviews as well as quantitative surveys of business students. Based on these they identified six items of particular salience and by means of confirmatory factor analysis establish that these can be divided into perceived support factors for and perceived barriers to becoming self employed. Hence, we make use of these items, as it is advocated in research methodology literature (Churchill and Peter 1984) that researchers should make use as often as possible of existing measurement instruments, rather than developing their own, in order to enhance comparability of research results.

The items reflecting perceived barriers are measured on a 5-point scale and are "Banks do not readily give credit to start up companies", "State laws (rules and regulations) are adverse to running a company" and "It is hard to find a business idea for a business that hasn't been realized before". The items used to operationalize perceived support factors (again on a 5-point scale) are "Entrepreneurs have a positive image within society", "Qualified consultant and service support for new companies is available" and "The creative atmosphere at TUM inspires the development of ideas for new businesses". As before for the constructs of sustainability orientation, propensity to innovate and attitudes towards entrepreneurship, and given that the unidimensionality of these constructs has been established in extant research, we create indices for perceived barriers and support factors as well.

Lastly, the dependent variable entrepreneurial intention is a self-evaluation by the respondents of the extent to which they agree with the statement that they will be self-employed

⁴ The correlation between an index based only on the first factor of the KAI index and an innovation propensity index based on all 13 items of the three factors identified for the KAI index is 0.65 and highly significant. Hence it does not matter much statistically, which of the two versions is used in the operationalization. Opposed to this the correlation between sustainability orientation and these two variants which could be used to operationalize innovativeness based on the KAI index is always insignificant. This confirms that sustainability orientation and innovativeness are (at least statistically) independent dimensions and that hence also analyzing their interaction could be appropriate (see footnote 9).

within the next five years.⁵ Table 2 summarizes the distribution of responses for our dependent variable and provides a breakdown by sub-sample.⁶

Table 2
Distribution of dependent variable

Response to “I intend to become self-employed in the next five years”	Students total (%)	Alumni total (%)	Σ (%)
I do not agree at all	11.8%	25.6%	15.8%
I largely disagree	29.1%	32.8%	30.2%
I cannot say yet	43.5%	23.2%	37.5%
I largely agree	10.2%	5.6%	8.9%
I absolutely agree	5.4%	12.8%	7.5%
Total	313	125	438
in %	71.5%	28.5%	100%

Note: percentage figures do not always up to exactly 100 per cent due to rounding of decimals to one digit.

Modeling

With regard to econometric modeling, given that the dependent variable of the analysis is ordinal, linear multiple regression using ordinary least squares would be inappropriate, since the method may lead to biased and inefficient estimates of the coefficients of the explanatory variables in the case of binary or ordinal dependent variables (Long 2002). Hence, we use an ordinal probit model (Greene 2003) with the dependent variable being measured on a 5-point scale.

The independent variables in the model are dummies for the degree course studied, and respectively for whether the respondents moved abroad for a practical placement or for their studies, a dummy for whether respondents finished a vocational training program prior to their studies, for gender, for age of the respondent, and for whether the respondents parents are or have been self-employed, an index score for sustainability orientation, an index score for propensity to innovativeness based on the originality component of the KAI index, along with index scores for attitudes towards entrepreneurship, perceptions of difference and support factors as well.

⁵ The responses to this question are correlated with a question asking in the survey whether or not respondents are currently self-employed ($p=0.32$, $p<0.01$), yet not to a level that they are multi-collinear. Hence including both variables in the analysis could provide additional insight but theoretical arguments advise against this (see also our explanations at the end of the modeling section of this paper).

⁶ Whilst all the alumni in our survey came from science and engineering backgrounds, a minority of them had subsequently acquired an MBA. Given the insights from the literature review and the arguments developed in our theory section, it could be that this minority differs significantly from the other alumni since they have acquired even more business related knowledge and thus business experience. However, comparing the mean scores of the latter alumni with those without MBA and that of the students reveals (based on an analysis of variance) that no significant differences exist between these groups in the propensity to become self-employed ($F=2.18$, $p=0.11$) as well as their sustainability orientation ($F=2.07$, $p=0.13$). Moreover, estimating the model reported in Table 2 for only those alumni who did not obtain an MBA does not change the results qualitatively.

Table 3
Coefficient estimates for ordered probit model

Variables	Model for ...	
	Students	Alumni
Sustainability orientation	0.269 * (0.107)	-0.033 (0.161)
Propensity to innovate	0.229 † (0.129)	0.411 † (0.218)
Gender (female = 0 / male =1)	0.010 (0.162)	0.804 * (0.401)
Age	0.029 (0.064)	0.001 (0.026)
Formal vocational training (yes = 1 / no = 0)	0.362 (0.266)	0.615 (0.418)
Attitudes towards entrepreneurship	0.734 *** (0.102)	1.569 *** (0.236)
Perceived barriers	-0.205 † (0.115)	0.152 (0.216)
Perceived support	0.139 (0.122)	-0.709 ** (0.223)
Studies abroad (yes = 1 / no = 0)	0.324 (0.380)	0.313 (0.306)
Parents self-employed (yes = 1 / no = 0)	0.415 ** (0.152)	0.362 (0.255)
Placement abroad (yes = 1 / no = 0)	0.042 (0.277)	0.197 (0.271)
Study course (21 categories)	p<0.001	p<0.001
Pseudo-R ²	0.185	0.327
No. of observations	313	125
Wald Chi ² p-value	454.77 <0.001	3671.15 <0.001
Log-likelihood	-348.064	-124.365

Significance levels: † 0.1 > p ≥ 0.05; * 0.05 > p ≥ 0.01; ** 0.01 > p ≥ 0.001; *** p < 0.001
Note: Heteroskedasticity-robust standard errors in parentheses

Alongside the models reported in the results section, we also calculated models including risk taking propensity and locus of control and additional models using a binary dependent variable measuring whether respondents are currently self-employed or not. These modifications did not qualitatively alter our results nor did the latter change with the alternative dependent

variable for which we also estimated instrumental variable models instrumenting attitude with additional variables such as locus of control and risk-taking propensity. Given that none of these modifications change our findings, we only report results for the estimations excluding risk-taking propensity and locus of control for reasons of model parsimony and because Lüthje and Franke (2003) argue that both locus of control and risk taking propensity, are actually antecedents to attitudes towards entrepreneurial behavior, but not attitudes themselves⁷, and thus cannot be directly related to our dependent variable. Moreover, the entrepreneurship literature is consistently arguing that behavior follows intentions (Krueger et al. 2000), hence using an extra binary variable for behavior as described does not provide much additional insight and we therefore refrain from reporting results for this variable. Still we note that our results for this binary variable are consistent with our ordinal entrepreneurial intention variable used in the models reported in the following paragraphs, hence further corroborating and supporting our findings.

Results

The results⁸ of the model estimation are summarized in Table 3. Notably, in both models (students as well as alumni) the dummies for the degree course studied were jointly significant; hence strongly justifying their initial inclusion, since their joint significance indicates that the propensity to become self-employed differs considerably across degree courses. As the R² values show, the models for both, students as well as alumni have good overall fit. In addition to this, all models are significant overall, as is clarified by the respective χ^2 statistics.

Inspecting the models in Table 3 with respect to the control variables, it can be seen that female alumni believe they are more likely to become self-employed in the future. On the other hand, students with self-employed parents are more likely to consider becoming self-employed. Moreover, attitudes towards entrepreneurship are for both samples significantly associated with a higher likelihood of intending to behave entrepreneurially. Both, students and alumni with a positive attitude towards entrepreneurship are thus more likely to intend to become self-employed. The same holds true for students and alumni with a higher propensity to innovate, as measured by the KAI index originality component. Our results therefore indicate that innovativeness is significantly and positively associated with the likelihood of entrepreneurial intentions. The effect of traits and contextual factors is furthermore largely supported by our data.

With respect to H1 and H2 we find that students with a stronger sustainability orientation are indeed more likely to intend to become self-employed. However, this effect completely vanishes when inspecting the alumni sample. H1 is thus only partially supported; sustainability orientation does indeed influence entrepreneurial intention, but not for every group of individuals. This is due to the fact that the effects reflected by H2 turned out to be even stronger than hypothesized: Not only is the effect of sustainability orientation for the experienced alumni sample lower than for the inexperienced student sample, but it is virtually non-existent. Thus, H2 is clearly supported by our data.⁹ The Chow test assures us that the difference of the

⁷ Especially where it addresses risk-taking propensity, the literature is also ambiguous in that some research suggests that entrepreneurs are moderate risk takers (Picot et al. 1989; Hisrich et al. 2007) which may imply a more neutral link between risk taking and entrepreneurship, thus further justifying our approach.

⁸ For reasons of clarity and brevity marginal effects are not reported but are available from the authors.

⁹ In a variation of our model we also included a centered interaction term of sustainability concern and propensity to innovate (i.e. the index score for the items of the KAI originality factor) in order to analyze the effects of very innovative sustainability-related entrepreneurial opportunities. We do not find significant positive associations for

sustainability orientation coefficients in the regression models estimated for the two groups (students and alumni) is also significant ($p = 0.056$). Thus, H2 is clearly supported by our data. Furthermore, investigating the alumni sample only and introducing the alumni's work experience as a moderator of the relationship of sustainability orientation and entrepreneurial intentions results in a positive, significant interaction term, thus lending further support to H2.¹⁰

Discussion

The link between sustainability orientation and entrepreneurial intentions

We proposed a goal of this paper to be to link the emergent literature of entrepreneurship for sustainable development to the larger body of literature determining the factors affecting entrepreneurial behavior and intentions. Thus we sought to integrate knowledge of conventional entrepreneurship with knowledge of sustainability issues. Moreover, by using large-scale survey data, the goal was to enhance the primarily conceptual literature on sustainable entrepreneurship with initial empirical insights. Our theoretical reasoning and our empirical results indicate that individual sustainability orientation can indeed explain entrepreneurial intention to some degree. The results are thus not only informative for researchers interested in the antecedents of entrepreneurial intention, but can also be utilized to further establish sustainable entrepreneurship as an important sub-field of the entrepreneurship domain.

Our results are both encouraging and perturbing at the same time. While we find a huge potential for exploiting sustainable development-oriented entrepreneurial opportunities among students, this obvious potential vanishes as business experience is gained. The literature review and the empirical results with respect to our second hypothesis suggest that, especially for less experienced students, concern with ethical, social and environmental issues is more likely to translate into entrepreneurial intention and subsequent potential entrepreneurial behavior. Thus, given that most entrepreneurial activity occurs with some time lag, that is, some years after completing a university program (Institute for Small Business Affairs Consortium 2004; Chlosta et al. 2006), there seems to be a gap between what students as potential future entrepreneurs believe they could do, and what they will actually do later on in their career. If not only entrepreneurial behavior is desirable, but sustainable entrepreneurial behavior as well, the challenge for entrepreneurship scholars, teachers and consultants is clear: What measures can we take so as not to waste the obvious potential among our students?

Against this background and the findings from our empirical study, it is consequently not enough just to make students understand the role of ethics and social responsibility in actual management decisions (Kraft and Singhapakdi 1991). The level of average sustainability orientation is already quite high in both of our samples (3.970 on a five-point scale), and therefore highlighting the general sustainability challenges (such as climate change, degradation of water resources or depletion of non-renewable resources such as oil) as well as the potential

this interaction term and hence no evidence indicating that the stronger an individual's propensity to innovate the stronger the impact of sustainability orientation on entrepreneurial intention. We therefore conclude that inclusion of an interaction term does not give insights beyond the results reported in Table 3. Furthermore, we also test for a mediating effect of the propensity to innovate on the link between sustainability orientation and entrepreneurial intention but have to reject this possibility as well, since the necessary conditions for a mediating effect (Baron and Kenny 1986) are not fulfilled. Even when relaxing these conditions, as is sometimes done in the literature, at most a partial mediation effect for the student sample could be envisaged, yet the coefficients for sustainability orientation differ only marginally between the unmediated and mediated models (0.275 and 0.269, respectively) and hence we consider this insufficient evidence for a mediating effect.

¹⁰ Again, for reasons of brevity this model is not reported but available upon request from the authors.

opportunities for sustainable entrepreneurship that result from these challenges should only be a first step. Still, students would certainly benefit from learning that there can be more to entrepreneurship than just harvesting entrepreneurial rents. Entrepreneurship is able to provide benefits for sustainable development that can help maximize the entrepreneur's utility function (which is likely to be the case, if the non-monetary benefits, such as existence and option values from e.g. preserving environmental public goods enter this function).

A key answer to the question of how the exploitation of opportunities for sustainable entrepreneurship could be encouraged seems to be through entrepreneurial education. In free market economies, problems should be solved by following the subsidiarity principle. Since governments cannot easily decide which market imperfections leading to unsustainable solutions should be addressed by legislative means and which by private initiative, they should provide incentives that foster sustainable development-oriented entrepreneurial behavior, and then let the entrepreneurs decide which opportunities to pursue. In addition to incentivizing such sustainability entrepreneurs with, for example, tax incentives, sponsorship of awards and the like, we would urge policy makers to make every effort not only to support entrepreneurship resulting in technological innovation, but also entrepreneurship resulting in sustainable market offerings.

Entrepreneurial education can contribute to this goal. To foster sustainable entrepreneurship, we therefore suggest that educators take the following measures as a minimum. First and foremost, special attention should be paid to master's degree, executive and continuing education programs in order to close the gap apparently created by business experience. Individuals with considerable business experience are particularly qualified to implement business models based on opportunities for sustainable entrepreneurship (Politis 2005). Given that one of the largest benefits of entrepreneurial education seems to be not the acquisition of knowledge about certain management instruments but rather entrepreneurial inspiration (Souitaris et al. 2007), we consider the inclusion of more cases of successful sustainable entrepreneurship in courses targeted at experienced individuals to be essential. Moreover, providing a platform in class for entrepreneurs committed to pursuing sustainable business models should also enhance the level of entrepreneurial intention amongst their audiences. Second, the potential of market imperfections to reveal sustainable entrepreneurial opportunities should be a standard component of every entrepreneurship curriculum. At the same time, we deem it essential that not only the business student faction, but a wider congregation of people concerned about sustainability is awakened to the additional potential brought by sustainable entrepreneurship. Such individuals show a high propensity to act (Bruyere and Rappe 2007) to achieve the goals of sustainability (for instance, grass-roots-activists affiliated to particular NGOs), but might not yet have considered economic action that would be in line with their sustainability orientation.

Entrepreneurship for sustainable development brought about in this way could complement high-tech entrepreneurship, which itself has been identified as an important factor of economic stability and prosperity (Daneke 1989). However, managing entrepreneurial ventures to the triple bottom line admittedly comes with a double challenge: not only does the venture have to be successful in economic terms, but in terms of its sustainability as well. For instance, even award-winning ventures such as Ecotricity have been occasionally criticized for losing sight of the sustainability goal in favor of broader economic success. Adding the sustainability dimension to the promise of entrepreneurship therefore simultaneously raises the bar both for entrepreneurship educators and for entrepreneurs pursuing this particular kind of opportunity.

Limitations and potential for future research

Our results should be interpreted in light of some limitations that naturally emerge from design of the study. First, analyzing a sample consisting mainly of students could be considered problematic to some extent. However, even though the subjects of the investigation are not actually engaged in sustainable entrepreneurial activities, future (sustainability) entrepreneurs are likely to be drawn from this particular population. We therefore feel that students (and alumni) are an extremely important group to study, since possession of a university degree has been shown to positively associate with entrepreneurial activity and intentions (Hisrich et al. 2007) and since graduates make up a large proportion of all entrepreneurially active individuals. Second, given our sample was recruited from a single university, replications will be necessary to permit the generalization of our empirical findings to wider entrepreneurship theory with more confidence (Lee and Baskerville 2003). Yet, since TUM is one of the largest universities in Germany, we expect our results to hold for other educational establishments with a focus on science and engineering education at least. Third, we believe that including environmental factors or different educational stimuli in the research design would be an interesting avenue for future research. This would permit the investigation of potentially moderating effects on the relationship in question. Another interesting approach would be to research operationalizations of entrepreneurial intention which would provide a route to distinguish conventional entrepreneurial intention from sustainable entrepreneurial intention.

Last, another aspect that potentially could confound the analysis is the nature of the reported link between sustainability orientation and entrepreneurial intentions. If over time, societal expectations that business ventures take sustainability into account increase, or if (relative to other opportunities) more sustainability-related opportunities become available, or if both trends occur at the same time, any association between sustainability orientation and entrepreneurial intention could become spurious — in that it could not be attributed to individuals with higher sustainability orientation being more entrepreneurial, but would be driven by changes in societal expectations and the structure of the opportunity space. Given that changes in expectations and opportunity sets take place over time, this could only be addressed through separate controls with panel data. Not having such data to hand is clearly a limitation of our study that should be addressed in future by longitudinal research designs. Yet, our data has some quasi-longitudinal element, in that we survey two broadly defined cohorts of students from one university, which are at different stages of their professional lifecycle, student or graduate. Assuming that changes in social expectations and an enhanced availability of sustainability-related opportunities (or both jointly) would be the only reason for an association between sustainability orientation and entrepreneurial intent, this should not lead to the observation of differences between students and alumni, since changes in expectations or opportunity sets at one point in time should basically affect all entrepreneurially-minded individuals in the same way. In this case the sustainability orientation of alumni should be significantly associated with entrepreneurial intention, if increased sustainability-related opportunities or increased societal expectations are indeed the only factors that matter. Empirically however, we find that this is not the case, and therefore we can indirectly infer that factors other than societal expectations or qualitative changes in the opportunity space — and specifically an individual's sustainability orientation — do matter.

Another aspect to be considered here is whether in recent years the share of sustainability-related opportunities, relative to the totality of all opportunities did in fact increase. First, whilst it is clear that environmental impacts have materialized strongly in the public's

awareness in recent years, other types of entrepreneurial opportunities increased significantly too. Telling examples are the first dot-com boom up until the year 2000 and the recent upsurge of Web 2.0 start-ups (Britton and McGonegal 2007). This fact should simply caution against the assumption that observing an increase in sustainability-related opportunities per se permits the conclusion that they are necessarily highly likely to be pursued by entrepreneurs. Second, societal expectations have in recent years certainly become much more demanding. However, these demands are quite often addressed towards established firms which have a significant impact because of the considerable size of their operations. Therefore, increasing societal demands per se also do not imply that entrepreneurs would more often pursue sustainability-related opportunities. Startups are just as likely to pursue conventional opportunities and compensate for their potentially negative social or environmental impact with the usual corporate social responsibility activities. There is evidence that most entrepreneurial ventures behave in exactly this way (Graafland et al. 2003; Jenkins 2006; Williamson et al. 2006) and hence it could well be that the share of sustainability-related opportunities does not increase just because societal expectations change. In fact, as outlined in the theoretical section, an important precondition for the share of sustainability-related opportunities increasing in the light of changed societal expectations should be that an entrepreneur's utility function is affected by non-monetary benefits, existence or option values so that pure profit maximization cannot guarantee that entrepreneurs maximize their utility function. Individuals with stronger sustainability orientations are precisely those that value non-monetary benefits, as well as existence and option values with regard to environmental goods. Therefore the link we propose in H1 would be a necessary condition for an increase of the share of sustainability-related opportunities relative to all opportunities pursued, even in the light of increasing societal demands. In this context, the actual process of pursuing a sustainability-related opportunity in terms of being allocation- or discovery-driven as embodied in the concepts of causation and effectuation (Sarasvathy 2001; Sarasvathy et al. 2003) seems to be of particular relevance for future research. Pursuing this link would also help to further refine our findings and the reasoning behind it.

Conclusion

With this study we aimed to contribute to the growing empirical literature on sustainable entrepreneurship by synthesizing results from the literature of entrepreneurial intentions, sustainable entrepreneurship, and entrepreneurship education. In this respect we were able to provide evidence that knowing the sustainability orientation of individuals can indeed add to our understanding of entrepreneurial intentions; moreover, we were able to highlight an important aspect of this relationship, namely its declining impact under the influence of business experience.

References

- Ajzen, I. (1991). "The theory of planned behavior," *Organisational Behavior and Human Decision Processes*, 50 (2), 1–63.
- Ajzen, I., and M. Fishbein (1977). "Attitude-behavior relations: A theoretical analysis and review of empirical research," *Psychological Bulletin*, 84, 888–918.
- Aldrich, H.E., and C.M. Fiol (1994). "Fools rush in? The institutional context of industry creation," *Academy of Management Review*, 19 (4), 645–670.
- Anderson, T.L., and D.R. Leal (1997). *Enviro-capitalists. Doing good while doing well*. Lanham, MD: Rowman & Littlefield.

- Arabsheibani, G., de Meza, D., Maloney, J., and B. Pearson (2000). "And a vision appeared unto them of a great profit: evidence of self-deception among the self-employed," *Economic Letters*, 67, 35–41.
- Aragon-Correa, J.A., and S. Sharma (2003). "A contingent resource-based view of proactive corporate environmental strategy," *Academy of Management Review*, 28 (1), 71–88.
- Armstrong, J.S., T. S. Overton (1977). "Estimating nonresponse bias in mail surveys," *Journal of Marketing Research*, 14, 396–402.
- Bagozzi, R.P., and G.R. Foxall (1995). "Construct validity and generalizability of the Kirton Adaption-Innovation Inventory," *European Journal of Personality*, 9, 185–206.
- Baum, J.R., Frese, M., Baron, R.A., J.A. Katz (2007). „Entrepreneurship as an area of psychological study: An introduction," in *The psychology of entrepreneurship*. Eds. Baum, J.R., Frese, M., and R.A. Baron. Mahwah, NJ: Lawrence Earlbaum, 1–18.
- Baron, R.M., and D.A. Kenny (1986). "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations," *Journal of Personality and Social Psychology*, 51 (6), 1173–1182.
- Bennett, S.J. (1991). *The complete guide to small business opportunities from the environmental revolution*. New York, NY: Wiley.
- Benton, R. (1989). "Environmental knowledge and attitudes of undergraduate business students compared to non-business students," *Business & Society*, 33, 191–211.
- Berle, G. (1991). *The green entrepreneur: business opportunities that can save the earth and make you money*. Blue Ridge Summit, PA: Liberty Hall Press.
- Bhave, M.P. (1997). "A process model of entrepreneurial venture creation," *Journal of Business Venturing*, 9 (3), 223– 242.
- BMU (1998). *Umweltbewusstsein in Deutschland 1998. Ergebnisse einer repräsentativen Bevölkerungsumfrage*. Berlin: Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit.
- BMU (2000). *Umweltbewusstsein in Deutschland 2000. Ergebnisse einer repräsentativen Bevölkerungsumfrage*. Berlin: Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit.
- BMU (2002). *Umweltbewusstsein in Deutschland 2002. Ergebnisse einer repräsentativen Bevölkerungsumfrage*. Berlin: Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit.
- Britton, D.B., and S. McGonegal (2007). *The Digital Economy Fact Book*. Washington, DC: The Progress & Freedom Foundation.
- Bobic, M., Davis, E., and R. Cunningham (1999). "The Kirton adaptation-innovation inventory: Validity issues, practical questions," *Review of Public Personnel Administration*, 19, 18–31.
- Borzaga, C., and L. Solari (2001). "Management challenges for social enterprises," in *The Emergence of Social Enterprises*. Eds. Borzaga, C., and J. Defourny. New York, NY: Routledge, 333–49.
- Brazeal, D.V., and T.T. Herbert (1999). "The genesis of entrepreneurship," *Entrepreneurship Theory and Practice*, 23 (3), 29–45.
- Bright, D.S., Fry, R., and D.L. Cooperrider (2006). "Transformative innovations for mutual benefit in business, society and environment," paper presented at the Annual Academy of Management Meeting, Atlanta, August.

- Brinckerhoff, P.C. (2000). *Social entrepreneurship: The art of mission-based venture development*. New York, NY: John Wiley & Sons.
- Bruyere, B., and S. Rappe (2007). "Identifying the motivations of environmental volunteers," *Journal of Environmental Planning and Management*, 50 (4), 503–516.
- Buttner, E.H., and N. Gyskiewicz (1993). "Entrepreneurs' problem-solving styles: An empirical study using the Kirton adaption/innovation theory," *Journal of Small Business Management*, 31 (1), 22–31.
- Chlosta, S., Klandt, H., T. Johann (2006). *German Survey on Collegiate Entrepreneurship*. Oestrich-Winkel: European Business School.
- Chrisman, J., McMullan, E., and J. Hall (2005). "The influence of guided preparation on the long-term performance of new ventures," *Journal of Business Venturing*, 20 (6), 769–791.
- Churchill, G.A., and J.P. Peter (1983). "Research design effects on the reliability of rating scales: A meta-analysis," *Journal of Marketing Research*, 21 (4), 360–375.
- Coase, R.H. (1974). "The lighthouse in economics," *Journal of Law and Economics*, 17 (2), 357–376.
- Cohen, B. (2006). "Sustainable valley entrepreneurial ecosystems," *Business Strategy and the Environment*, 15, 1–14.
- Cohen, B., Smith, B., and R. Mitchell (2008). "Toward a sustainable conceptualization of dependent variables in entrepreneurship research," *Business Strategy and the Environment*, 17, 107–119.
- Cohen, B., and M.I. Winn (2007). "Market imperfections, opportunity and sustainable entrepreneurship," *Journal of Business Venturing*, 22, 29–49.
- Cote, J.A., and M.R. Buckley (1987). "Estimating trait, method and error variance: Generalizing across 70 construct validation studies," *Journal of Marketing Research*, 24, 315–318.
- Daneke, G.A. (1989). "Technological entrepreneurship as a focal point of economic development policy: A conceptual re-assessment," *Policy Studies Journal*, 17 (3), 643–655.
- Dean, T.J., and J.S. McMullen (2007). "Toward a theory of sustainable entrepreneurship: Reducing environmental degradation through entrepreneurial action," *Journal of Business Venturing*, 22, 50–76.
- Delmar, F., and S. Shane (2004). "Legitimizing first: Organizing activities and the survival of new ventures," *Journal of Business Venturing*, 19 (3), 385–410.
- Dembkowski, S., and S. Hamner-Lloyd (1994). "The Environmental Value-Attitude-System model: A Framework to Guide the Understanding of Environmentally-conscious Consumer Behaviour," *Journal of Marketing Management*, 10, 593–603.
- Desa, G., and S. Kotha (2006). "Ownership mission and environment: an exploratory analysis into the evolution of a technology social venture," in *Social Entrepreneurship*. Eds. Mair, J., Robertson, J., and K. Hockerts. New York, NY: Palgrave Macmillan, 155–79.
- Diekmann, A., and P. Preisendörfer (1991). "Umweltbewusstsein, ökonomische Anreize und Umweltverhalten," *Schweizerische Zeitschrift für Soziologie*, 17, 207–231.
- DiMaggio, P. (1988). "Interest and Agency in Institutional Theory," in *Institutional Patterns and Organizations. Culture and Environment*. Ed. L.G. Zucker. Cambridge, MA: Ballinger, 3–21.
- Dowling, J., and J. Pfeffer (1975). "Organizational legitimacy: Social values and organizational behavior," *Pacific Sociological Review*, 18 (1), 122–136.

- Elkington, J. (1997). *Cannibals with forks: The triple bottom line of 21st century business*. Gabriola Island, Canada: New Society Publishers.
- Foxall, G.R., and P.M.W. Hackett (1992). "The factor structure and construct validity of the Kirton adaption-innovation inventory," *Personality and Individual Differences*, 13 (9), 967–975.
- Frank, R.H., Gilovich, T., and D.T. Regan (1993). "Does studying economics inhibit cooperation?" *Journal of Economic Perspectives*, 7 (2), 159–171.
- Fraser, S., and F.J. Greene (2006). "The effects of experience on entrepreneurial optimism and uncertainty," *Economica*, 73, 169–192.
- Gartner, W.B (1988). "'Who is an entrepreneur?' is the wrong question," *American Journal of Small Business*, 12, 11–32.
- Ghoshal, S. (2005). "Bad management theories are destroying good management practice," *Academy of Management Learning & Education*, 4 (1), 75–91.
- Graafland, J., van de Ven, B., and N. Stoffele (2003). „Strategies and Instruments for Organising CSR by Small and Large Businesses in the Netherlands," *Journal of Business Ethics*, 47 (1), 45–60.
- Greene, W.H. (2003). *Econometric analysis*. Upper Saddle River, NY: Prentice-Hall.
- Hall, J., and H. Vredenburg (2003). "The challenges of sustainable development innovation," *MIT Sloan Management Review*, 45 (1), 61–68.
- Hardin, G. (1968). "The tragedy of the commons," *Science*, 162, 1243–1248.
- Harman, H.H. (1967). *Modern factor analysis*. Chicago, IL: University of Chicago Press.
- Hanley, N., and C. Spash (1992). *Cost Benefit Analysis and the Environment*. Aldershot: Edward Elgar.
- Hisrich, R.D., Peters, M.P., and D.A. Shepherd (2007) . *Entrepreneurship*. New York, NY: McGraw-Hill.
- Homburg, C., and M. Bucerius (2006). "Is speed of integration really a success factor of mergers and acquisitions? An analysis of the role of internal and external relatedness," *Strategic Management Journal*, 27 (4), 347 – 368.
- Institute for Small Business Affairs Consortium (2004). *Making the journey from student to entrepreneur: A review of the existing research into graduate entrepreneurship*. Birmingham: National Council for Graduate Entrepreneurship.
- Isaak, R. (1999). *Green Logic: Ecopreneurship, theory and ethics*. West Hartford, CT: Kumarian.
- Jaffe, A.B., and R.N. Stavins (1994). "Energy-efficiency investments and public policy," *The Energy Journal*, 15 (2), 1-23.
- Jenkins, H. (2006). "Small Business Champions for Corporate Social Responsibility," *Journal of Business Ethics*, 67 (3), 241–256.
- Keh, H.T., Foo, M.D., and C.B. Lim (2002). "Opportunity evaluation under risky conditions: The cognitive processes of entrepreneurs," *Entrepreneurship Theory and Practice* 27, 125–148.
- Keogh, P.D., and M.J. Polonsky (1998). "Environmental commitment: A basis for environmental entrepreneurship?" *Journal of Organizational Change Management*, 11 (1), 38–49.
- Kirton, M.J. (1976). "Adaptors and innovators: A description and measure," *Journal of Applied Psychology*, 61 (5), 622–629.
- Kirton, M.J. (2003). *Adaption-innovation in the context of diversity and change*. London, UK: Routledge.

- Kirzner, I.M. (1985). *Discovery and the capitalist process*. Chicago, IL: University of Chicago Press.
- Kraft, K.L., and A. Singhapakdi (1991). "The role of ethics and social responsibility in achieving organizational effectiveness: Students versus managers," *Journal of Business Ethics*, 10, 679–686.
- Krueger, N.F., Reilly, M.D., and A.L. Carsrud (2000). "Competing models of entrepreneurial intentions," *Journal of Business Venturing*, 15, 411–432.
- Kyrö, P. (2001). "To grow or not to grow? Entrepreneurship and sustainable development," *International Journal of Sustainable Development and World Ecology*, 8 (1), 15–28.
- Larson, A.L. (2000). "Sustainable innovation through an entrepreneurship lens," *Business Strategy and the Environment*, 9, 304–317.
- Lee, A.S., and R.L. Baskerville (2003). "Generalizing Generalizability in Information Systems Research," *Information Systems Research*, 14 (3), 221–243.
- Lehmann, M., Christensen, P., and J. Møller Larsen (2005). „Self-regulation and new institutions. The case of green networks in Denmark,” in *Corporate Environmental Strategy and Competitive Advantage*. Eds. Sharma, S., and J.A. Aragón-Correa. Northampton, MA: Edward Elgar, 286–308.
- Lenox, M. (2006). "The role of private, decentralized institutions in sustaining industry self-regulation," *Organization Science*, 17 (6), 670–690.
- Linnanen, L. (2002). "An insider's experience with environmental entrepreneurship," *Greener Management International*, 38, 71–80.
- Long, J.S. (2002). *Regression models for categorical and limited dependent variables*. Thousand Oaks, CA: Sage.
- Lüthje, C., and N. Franke (2003). "The 'making' of an entrepreneur: testing a model of entrepreneurial intent among engineering students at MIT," *R&D Management*, 33 (2), 135–147.
- Mair, J., Robinson, J., and K. Hockerts (2005). *Social entrepreneurship*. New York, NY: Palgrave Macmillan.
- Marcati, A., Guido, G., and A.M. Peluso (2008). "The role of SME entrepreneurs' innovativeness and personality in the adoption of innovations," *Research Policy*, 37 (9), 1579–1590.
- Milstein, M.B., London, T., and S. Hart (2006). "Capturing the opportunity of creating a more inclusive capitalism," paper presented at the Annual Academy of Management Meeting, Atlanta, August.
- Mitchell, R.K., Busenitz, L., Lant, T., McDougall, P.P., Morse, E.A., and J. Smith (2002). "Toward a theory of entrepreneurial cognition: Rethinking the people side of entrepreneurship research," *Entrepreneurship Theory and Practice*, 27, 93–104.
- Naffziger, D.W. Hornsby, J.S., and D.F. Kuratko (1994). "A proposed research model of entrepreneurial motivation," *Entrepreneurship Theory and Practice*, 18 (3), 29–42.
- Neter, J., Kutner, M.H., Wasserman, W., and C.J. Nachtsheim (1996). *Applied linear statistical models*. New York, NY: McGraw-Hill.
- Nicolls, A. (2006). *Social entrepreneurship – new models of sustainable social change*. Oxford, UK: Oxford University Press.
- Oppenheimer, M. (2006). "Science and Environmental Policy: The Role of Nongovernmental Organizations," *Social Research*, 73 (3), 881–890.

- Parsa, F., and W.M. Lankford (1999). "Student's views of business ethics: An analysis," *Journal of Applied Psychology*, 29 (5), 1045–1057.
- Pastakia, A. (1998). "Grassroots ecopreneurs: Change agents for a sustainable society," *Journal of Organizational Change Management*, 11 (2), 157–173.
- Pennings, J., and J. Kimberly (1997). "Environmental influences on the creation process," in *The Organizational Life Cycle. Issues in the creation, transformation, and decline of organizations*. Ed. R. Miles. San Francisco, CA: Jossey-Bass, 135–160.
- Peterson, R.A. (1994). "A meta-analysis of cronbach's coefficient alpha," *Journal of Consumer Research*, 21 (2), 381–391.
- Pfeiffer, F., and F. Reize (2000). "Business Start-ups by the Unemployed – an Econometric Analysis based on Firm Data," *Labour Economics*, 7 (5), 629–663.
- Picot, A., Schneider, D., and U. Laub (1989). „Transaktionskosten und innovative Unternehmensgründungen,“ *Zeitschrift für betriebswirtschaftliche Forschung*, 26, 358 – 387.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y., and N.P. Podsakoff (2003). „Common method biases in behavioral research: A critical review of the literature and recommended remedies,“ *Journal of Applied Psychology*, 88 (5), 879–903.
- Politis, D. (2005). "The Process of Entrepreneurial Learning: A Conceptual Framework," *Entrepreneurship Theory and Practice*, 29 (4), 399–424.
- Prahalad C.K., and A. Hammond (2002). "Serving the world's poor, profitably," *Harvard Business Review*, 80 (9), 48–57.
- Prahalad, C.K. (2005). *The fortune at the bottom of the pyramid: Eradicating poverty through profits*. Philadelphia, PA: The Wharton School.
- Prahalad, C.K. (2006). "The innovation sandbox," *Strategy and Business*, 44, 1–10.
- Rauch, A., and M. Frese (2007). "Let's put the person back into entrepreneurship research: A meta-analysis on the relationship between business owner's personality traits, business creation, and success," *European Journal of Work and Organizational Psychology*, 16, 353–385.
- Robinson, P.B., Stimpson, D.V., Huefner, J.C., and H.K. Hunt (1991). An attitude approach to the prediction of entrepreneurship," *Entrepreneurship Theory and Practice*, 15, 13–31.
- Sanstad, A.H., and R.B. Howarth (1994). "'Normal' markets, market imperfections and energy efficiency," *Energy Policy*, 22 (10), 811-818.
- Sarasvathy, S. (2001). "Causation and Effectuation: Toward a Theoretical Shift from Economic Inevitability to Entrepreneurial Contingency," *Academy of Management Review*, 26 (2), 243-264.
- Sarasvathy, S., Dew. N., Velamuri, S.R., and S. Venkataraman (2003). "Three views of entrepreneurial opportunity," in *Handbook of Entrepreneurship Research - An Interdisciplinary Survey and Introduction*. Eds. Acs, Z.B., and D.B. Audretsch. New York, NY: Springer, 141–160.
- Schaltegger, S. (2002). "A framework for ecopreneurship. Leading bioneers and environmental managers to ecopreneurship," *Greener Management International*, 38, 45–58.
- Schaper, M. (2005). *Making ecopreneurs: Developing sustainable entrepreneurship*. Ashgate, UK: Aldershot.
- Shane, S. (2000). "Prior knowledge and the discovery of entrepreneurial opportunities," *Organization Science*, 11 (4), 448–69.

- Shane, S., and S. Venkataraman (2000). "The promise of entrepreneurship as a field of research," *Academy of Management Review*, 25 (1), 217–226.
- Simon, H.A. (1956). "Rational choice and the structure of the environment," *Psychological Review*, 63 (2), 129-138.
- Souitaris, V., Zerbinati, S., and A. Al-Laham (2007). "Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources," *Journal of Business Venturing*, 22, 566–591.
- Staber, U. (1997). "An ecological perspective on entrepreneurship in industrial districts," *Entrepreneurship and Regional Development*, 24 (1), 37–48.
- Starr, J.A., and I.A. Macmillan (1990). "Resource cooptation via social contracting: Resource acquisition strategies for new ventures," *Strategic Management Journal*, 11, 79–92.
- Stewart, W.H., and P.L. Roth (2001). "Risk propensity differences between entrepreneurs and managers: A meta-analytic review," *Journal of Applied Psychology*, 86, 145–153.
- Stinchcombe, A.L. (1965). "Social structure and organizations," in *Handbook of organizations*. Ed. J.G. March. Chicago, IL: Rand McNally, 142–193.
- Taylor, W.G.K. (1989a). "The Kirton adaption-innovation inventory: a re-examination of the factor structure," *Journal of Organizational Behavior*, 10 (4), 297–307.
- Taylor, W.G.K. (1989b). "The Kirton adaption-innovation inventory: Should the sub-scales be orthogonal?" *Personality and Individual Differences*, 10 (9), 921–929.
- Tilley, F. (1999). "The Gap Between The Environmental Attitudes and The Environmental Behaviour of Small Firms," *Business Strategy and the Environment*, 8 (4), 238–248.
- Venkataraman, S. (1997). "The distinctive domain of entrepreneurship research: an editors' perspective," in *Advances in entrepreneurship, firm emergence, and growth*. Eds. Katz, J., and J. Brockhaus. New York, NY: Springer, 141–160.
- Wagner, J., (2003/2004). "Der Noth gehorchend, nicht dem eignen Trieb: Nascent Necessity and Opportunity Entrepreneurs in Germany – Evidence from the Regional Entrepreneurship Monitor (REM)," *RWI: Mitteilungen. Quarterly*, 54/55 (3–4), 287–303.
- Walley, E., and D. Taylor (2002). "Opportunists, champions, mavericks? A typology of green entrepreneurs," *Greener Management International*, 38, 31–35.
- Williamson, D., Lynch-Wood, G., and J. Ramsay (2006). "Drivers of Environmental Behaviour in Manufacturing SME and the Implications for CSR," *Journal of Business Ethics*, 67 (3), 317–330.
- Willis, K.G. (1989). "Option Value and Non-user Benefits of Wildlife Conservation," *Journal of Rural Studies*, 5, 245– 256.
- World Commission on Environment and Development (1987). *Our common future*. Oxford, UK: Oxford University Press.
- Zahra, S.A., Rawhouser, H.N., Bhawe, N. Neubaum, D.O., and J.C. Hayton (2008). "Globalization of Social Entrepreneurship Opportunities," *Strategic Entrepreneurship Journal* 2 (2), 117–131.
- Zahra, S.A., Gedajlovic, E., Neubaum, D.O., and J.M. Shulman (in press). "A typology of social entrepreneurs: Motives, search processes and ethical challenges." *Journal of Business Venturing*.
- Zimmerman, M., and G.J. Zeitz (2002). "Beyond survival: Achieving new venture growth by building legitimacy," *Academy of Management Review*, 27 (3), 414–431.

What Social Entrepreneurship Ventures Can Learn from Resource (RBV) Theory and Institutional Theory

Social Entrepreneurship is a growing global-wide movement with wonderful and inspiring stories and films of heroic social entrepreneurs and the dynamic social ventures these social entrepreneurs start and grow to make the world a better place for all people. University students are drawn to the world of social entrepreneurship ventures because many of them truly want to make a difference. Brooks (2008) defines social entrepreneurship as the: “process of creating value by bringing together a unique package of resources to exploit an opportunity, in pursuit of high *social* returns.”

The question for organizational scholars is what can organizational theories contribute to understanding and improving these millions of social ventures? Two theories that have the potential to help scholars understand new social ventures are the Resource-based View (RBV) described by Barney (1991; 2002); Penrose (1995); and Wernerfelt (1984). RBV discusses and explains how to create competitive organizational advantages by developing resources and then intelligently managing their deployment. These resources are: (1) rare, (2) valuable, and (3) imitable, i.e., hard to imitate or copy and also difficult to substitute. Resources can be physical assets and also intangible assets (e.g. organizational culture and organizational-specific “know-how”). This paper will explore ways that RBV theory can help scholars understand social entrepreneurs and the new ventures they create.

Institutional Theory, in particular organizational institutional theory as written about by DiMaggio & Powell (1983); Meyer & Rowan (1977); Powell & DiMaggio (1991); Scott (1992, 2003, 2008); and Scott & Meyer (1994) will provide in this paper a foundation for describing and understanding how to create social entrepreneurship venture organizational support and success. Institutional Theory provides three major constructs on creating support: (1) regulative, how expedience occurs, (2) normative, how social obligations are constructed and enhances, and (3) cultural-cognitive dimensions including taken-for-grantedness beliefs and shared understandings among organizational participants. All three constructs can be supported through legal, moral, comprehensible, recognizable, or culturally supported types of legitimacy to build organizational support and success. The various ways and methods for creating social entrepreneurship venture legitimacy constitute the second part of this paper.

Societal Entrepreneurship in the development of Incubators and Science Parks

by Erik Lindhult

The aim of this paper is to develop an understanding of the character of societal entrepreneurship in the development of incubators and science parks. The study is performed through interactive research in the context of the PRIM project, a collaboration and partnership for development between eight science parks and incubators in the middle of Sweden. A model for the understanding of societal entrepreneurship and its connection to entrepreneurship theory is developed. A regional innovation incubator case is analyzed as an example of a societal entrepreneurial profiled incubator in order to illustrate the theoretical discussion.

Introduction

In Sweden, as in most countries, there are a number of organizations and actors - science parks, incubators, advisory system - which serves as innovative environments and supportive contexts for cultivating entrepreneurship. The public and private resource input into these agencies for entrepreneurship is growing globally as it is a focus point for regional and industrial policy. The productivity of these organizations in generating entrepreneurial ventures as well as their economic effects has been focused on in research as well as policy studies, but less so the entrepreneurial forces in the development of these organizations and environments themselves, particularly their communal and societal dimensions. The aim of this paper is to develop an understanding of the character of these dimensions of entrepreneurship in the development of incubators and science parks. An assumption is that these forces and practices of societal oriented entrepreneurship are significant for the outcomes of the activities. It can provide an additional explanatory variable of the productivity and effects of these agencies, an issue where research still is inconclusive.

The study is performed through interactive research in the context of the PRIM project, a collaboration and partnership for development between eight science parks and incubators in the middle of Sweden. Many of the members of project can be considered societal entrepreneurs in their respective environments. Main aspects of research are the articulation of the experience of members and develop them through collective reflections in the arenas that the project provides.

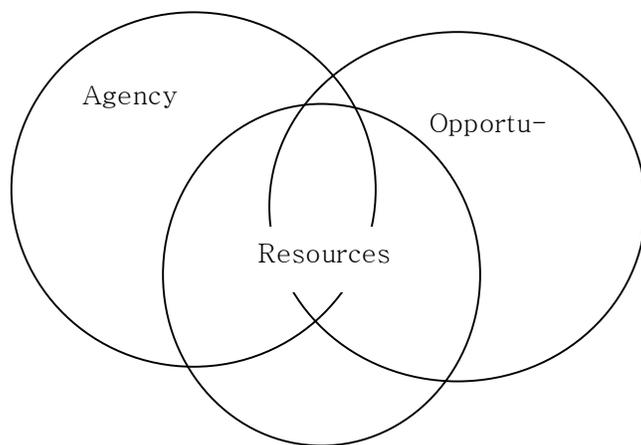
The paper is focused on developing a model for the understanding of societal entrepreneurship and its connection to entrepreneurship theory. A case of an regional innovation incubator is then analyzed as an example of a societal entrepreneurial profiled incubator in order to illustrate the theoretical discussion.

Theory of entrepreneurship – conceptualizing societal dimensions

There is today a spectrum of theoretical perspectives in the area of entrepreneurship research. The effort of clarifying this societal entrepreneurship for entrepreneurship is related to movements in entrepreneurship research and practice of opening up for broader spectrum of entrepreneurship, reclaiming it as societal phenomena and as social forces for change (Steyaert, and Katz 2004; Spinosa, Flores, and Dreyfus 1997; Gawell, Johannisson, and Lundqvist 2009). The point of departure is the enterprising and constructive efforts of a broad range of agencies in society, also including supportive contexts like personal networks and communities. A distinction will be made between social and societal entrepreneurship. A point of departure will particularly be taken in the concepts of “community entrepreneurship” (Johannisson, and Nilsson 1989) and “public entrepreneurship” (Steyaert, and Hjorth 2006). It provides entrepreneurial perspectives where actors take the role of concerned citizens with their particular experiences, interests, professional background and capacities come together and associate in order to discuss and deal with common - and thus public - matters.

As a point of departure, the main focus of different theoretical perspectives on entrepreneurship can be classified in three basic dimensions (Stevenson, and Lundström 2001; Landström 2005): driving agency, opportunity for value creation, and resources and capacities.

Figure 1. Main dimensions in entrepreneurship theory (Stevenson, and Lundström 2001; Landström, 2005).



A first stop in entrepreneurship theory is often agency. Without enterprising individuals, no entrepreneurship. The driving capacity of actors that through mobilizing, developing and organizing resources and people can create value in society is a necessary dimension. Often there is a focus on the specific entrepreneurial characteristics of individuals, identified as having done great feats of entrepreneurship like starting a business. In the context of societal entrepreneurship also combined and collective entrepreneurship is important.

Entrepreneurship as discovery, creation and exploitation of opportunity is another condensation area in entrepreneurship theory (Shane&Venkataraman 2000). This can be seen as a neo-Austrian perspective going back to Austrian thinkers like Kirzner. He saw alertness to profit opportunity based on subjectively delimited information as a core feature of entrepreneurship. Opportunity in the area of societal entrepreneurship need to be seen in a broader perspective, also include creation of societally important values.

Opportunities driven by entrepreneurs cannot do much without resources. There are theoretical perspectives in entrepreneurship domain that also emphasize that certain kinds of resources or resource constellations are important source of entrepreneurship. Neoclassical theory as the dominant theory in economics focuses on availability of capital for investing in business development. The focus is primarily on financial capital, where its availability for investment programs is driving entrepreneurship. The perspective can also be broadened to include human and social capital. Unused resources sets in motion the search for opportunities to use them in a productive way, creating new value both for certain groups and for the entrepreneurs developing and effectuating the opportunity (Penrose 1995; Sarasvarthy 2001). It might be added that misused resources also seems to be able to set in motion entrepreneurial activity of a more social or societal kind. Penrose (1995) is also emphasizing that the availability, quantity and quality of entrepreneurial services is an important restricting as well as inducing resource. She does not take entrepreneurial agency as a given point of departure but as a resource to be developed.

These different focuses flow into and connect to each other in different ways. We will take a point of departure in these three dimensions. How does the different dimension link to societal dimensions? We will later use incubators and science parks as example, particularly a case of an incubator with a societal entrepreneurship profile. The main aim of this type of organizations is to support business start-up and growth.

Societal entrepreneurship is entrepreneurship that is directly focused on innovation in societal dimensions (Gawell, Johannisson, and Lundqvist 2009). It is innovative, societally useful initiatives. Society can be conceptualized as a group of individuals united by a network of social relations with a certain duration and continuity over time. Other features is that individuals have a common culture and tradition, that society will survive its inhabitants, for the most part, reproduce itself and that it is territorially defined.

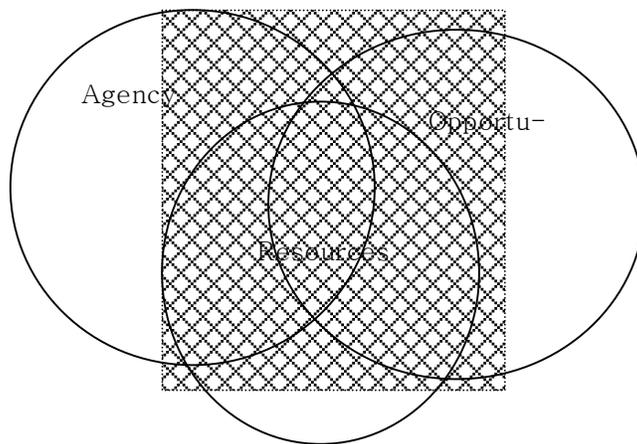
We focus on actors that are driving in the development of incubators and science parks, which are supportive agencies for “ordinary” entrepreneurs that may take advantage of the incubators and science parks for their business development. These agencies are a case of societal entrepreneurship to the extent that they are focusing on societal innovation and the creation of societal value. Here we have to recognize that entrepreneurial agents have different balances in the focus on the creation of societal value, personal value as well as value for certain organizations and groups. The mix is often difficult to clarify and may change in emphasis depending on particular situations and phases. But the actors or actor constellation forming the societal entrepreneurship agency need to legitimize itself in relation to their societal aims and opportunity seeking.

Motivational forces are also related to societal values and interests. Agents are also members of and professional and socialized part of a societal context. A main focus is on value creation for the societal context that is on focus of the entrepreneurial venture. Business start-up and growth constitute an important societal opportunity for job creation, tax revenue as well as wealth creation, implying reproduction and growth of the societal context.

From a resource perspective, entrepreneurial capacity for starting and developing businesses is crucial. The availability, quantity and quality of entrepreneurial services is from a societal point of view a resource which is important for job creation and tax revenues. Also, the entrepreneurial option is an important value for freedom and self-determination of members of the societal context

As a further step in the search for a theoretical clarification of societal entrepreneurship, we will connect entrepreneurship to societal context. In an early statement of societal entrepreneurship (Johannisson, and Nilsson 1989) it is characterized as “contextual” rather than autonomous. Traditionally entrepreneurship is predominately conceptualized as free from societal context. If this context is considered it is often from an individualistic societal perspective with an under socialized assumption of agency. But entrepreneurship is always situated in societal context which is manifested in such things as identity, values, relations, traditions, needs and interests, which is influencing it. In the case of societal entrepreneurship, this contextual dimension is a core feature. The entrepreneurial agents take a point of departure in the social context and are striving to develop it. The opportunity striven for has a main focus value creation for the societal context. The resources mobilized and developed also often are mainly situated in the social context.

Figure 2. Entrepreneurship contextualized



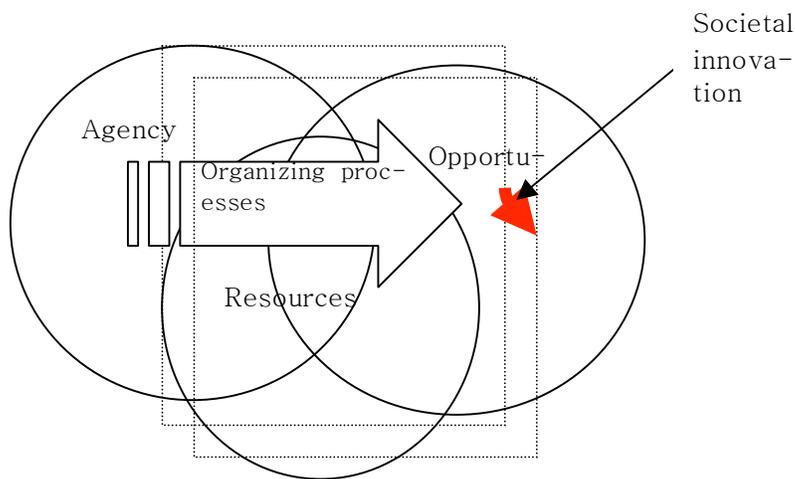
Incubators and science parks in most cases have an important contextual mission of developing and transforming the industrial structure of the region by supporting start-up and growth of

new firms. It creates jobs, public revenues and wealth.

Entrepreneurship is also about activities and processes. A fruitful approach to entrepreneurship is to see it as a form of organizing activities and processes (Johannisson 2000; Gartner 1988), created and run by different actors thus exercising entrepreneurship. Organizing processes are carriers of entrepreneurship to the extent that they develop and put into effect the value-potential of actors through the mobilization and generation of resources in a sustainable activity.

Societal entrepreneurship implies more complex organizing process also involving institutional change, and is more contextually focused. It implies attempt at societal innovation. Alliances, partnering and federating between different actors related to the context is often crucial in societal entrepreneurial organizing efforts.

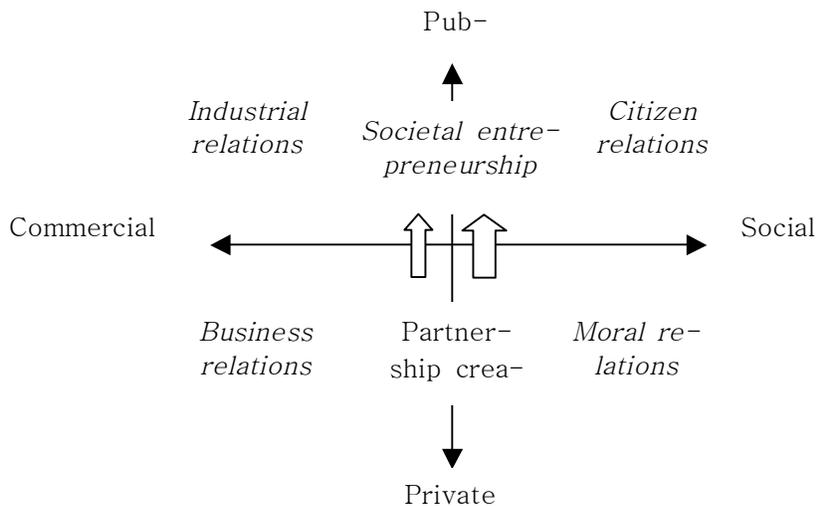
Figure 3. Entrepreneurship, organizing processes and societal innovation as contextual change



The social dimension can be distinguished from the societal dimension. The dominant understanding of social entrepreneurship compared with traditional commercial entrepreneurship is that the focus and purpose are socially - not profit-oriented. Societal entrepreneurship may instead be linked to the dimension private-societal/public, where the societal element is determined by the extent to which entrepreneurship is based on and focuses on the creation, recreation and transformation of "society". The context of entrepreneurship is seen here as organized in communities, social institutions and more or less formal organizations, where entrepreneurship is aimed at the creation, modification and improvement of this society. The "public" in the entrepreneurship is not in the first place that it is included in the public sector, but is aimed at activities involving everyone in a particular social context (for example, a district or region) or is consid

ered of common/public interest.

Figure 4. Societal entrepreneurship, social entrepreneurship and different relations



Johannisson, and Nilsson (1989) focuses on societal entrepreneurship as entrepreneurship contextually anchored in a local community, but it can also be generalized to other types of communities such as organizations or companies. What I would like to add as an additional dimension as central to societal entrepreneurs they need to convince others of the public interest, or federate to, "commonalize" the venture. It is important to involve others as partners, supporters or donors of resources. Here federating and partnership creation is a key strategy to "commonalize" and legitimize societal entrepreneurial "ventures".

We will go further by analyzing a case which is illustrative how societal entrepreneurship can manifest itself in practice.

Case: A regional innovation incubator

Uppsala Innovation Center (UIC) is a regional incubator which can be considered to manifest a societal entrepreneurship profile. The following table characterizes some main elements in its

profile, in comparison with more commercially oriented or public oriented incubator profiles.

Table 1. Comparison between commercial, societal entrepreneurial and public/state governed incubators, based on the UIC case

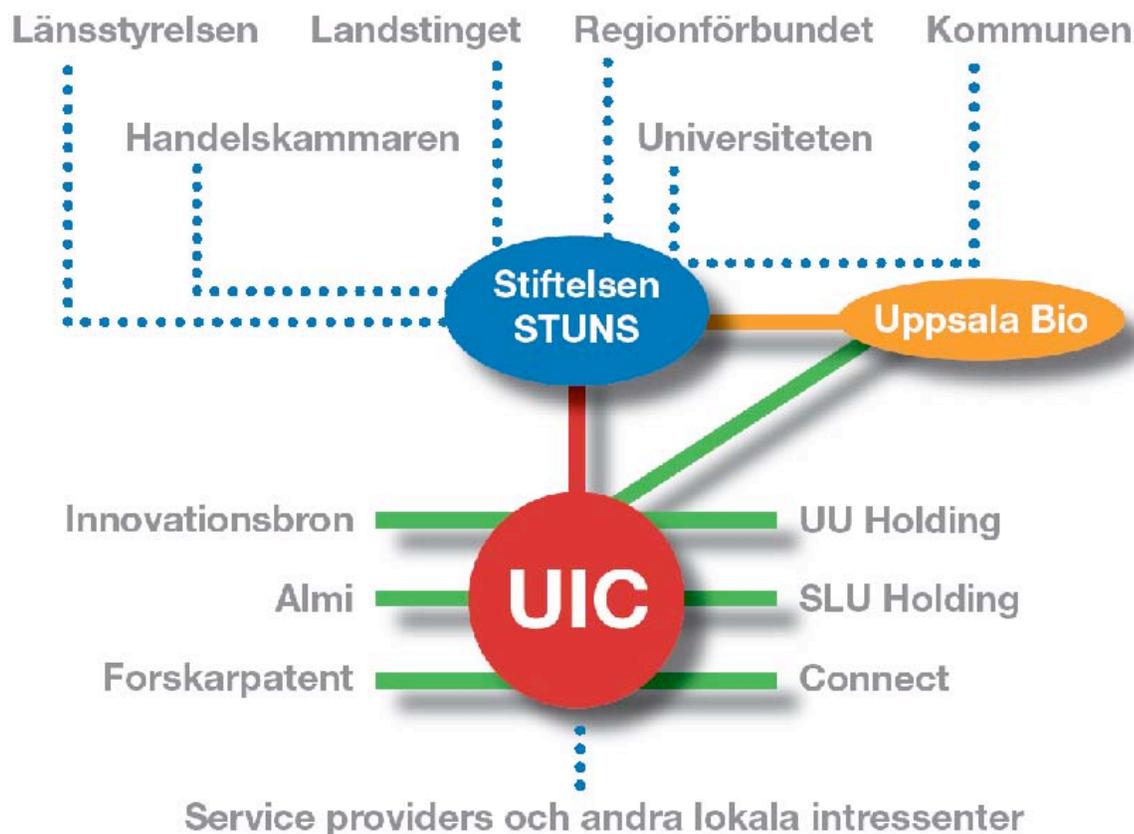
Incubator type	Commercial	Societal entrepreneurship UIC focus	Public
Financing, resource provision	Venture capital, return on shares in client companies, business consulting and administrative fees	Partnership (UIC 23) – combines community value and partner value (can be commercial or public) Innovationsbron – national value + financial sustainability	Public funding (often connected to certain policy areas and goals, certain public agencies)
Ownership, organization	Homogeneous group of owners, Limited liability (AB), Competence focus of board	Foundation (STUNS), UIC AB – greater freedom. Board must act in the interest of AB. Board has clear anchorage in the region Not physical place: less investment, operate in whole region	Public ownership, can be governed in collaboration with community agencies
Result	Profit, return on investment, company valuation, tends towards fewer employees in client companies	New, strong companies (high survival and growth capacity) Regional economic development (transformation?) with focus on opportunities in industry integration Job creation Financial return on investment of investors (UIC calculates public financial return) Value return for partners	Increasing public revenues Decreasing public costs Public value return on public investment Job creation (many employees preferable) Sustainable economic growth Less need for consideration of partner return
Success factors	Driving force of profit/return of investment. More focused goals, greater freedom of action	Committed and contributing partner network (with UIC as nave) – expertise, lower cost of partner contribution (as non-financial partner value also produced), legitimation, activates and builds innovation system, attraction power. Unpartiality gives credibility (no financial interest in client companies) Driving forces both related to commercial, communal and public interests	Public legitimation, mandate and funding. Seed capital in early phases can be publicly funded (as new companies/job creation a public interest)

Limitations	Uncertainty and risk in new venture investment, Difficulty of financing earlier phases of innovation and business development	Cost and time of partner network management More complex goal structure No share in client companies, no financial share in success	Cost, efficiency and drive less related to results
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Partnering and good integration in the regional innovation system is central for UIC for different reasons:

- Legitimation of UIC as publicly oriented, in the sense of serving all parties in the region equally.
- By being legitimated as publicly oriented, other actors is motivated to partner with UIC and support its mission to the extent that they also share such a broader, regional interest.
- Through partner agreements, different service providers deliver services at a lower rate and and in customized modes. The reason is that they see different values in partnering with UIC.
- By attaining the status as the regions incubator, competition between other efforts to establish incubators is avoided. It can be argued that concentrating scarce resources for incubation helps to strengthen quality of the services offered.
- The inflow of cases is also increased, making possible the selection of high quality ventures. This also increase the chances of developing sustainable and high growth firms

Figure 5. Uppsala Innovation Center in the regional innovation system



Being impartial, objective and performing high quality assessment is also important for UIC in order to legitimate itself as an actor doing service for the whole region. The impartial status is also strengthened by the policy of not investing and thus having no stake in the incubator companies. The credibility of UIC is thus heightened in the eyes of investors both in UIC and in the incubating companies partly based on impartial advice from UIC.

In its societal entrepreneurial development, its organizing efforts are also important in order to be able to legitimate its activity and being able to further societal innovation. The collaborative formed actor STUNS – a regional triple helix foundation – has been instrumental in the organizing effort to create the position of UIC.

Concluding remarks

Societal entrepreneurship has only recently started to be used. Our aim is to understand its use in the context of development of incubators and science parks, recognizing it as an important factor in their development. As a first step, the paper has focused on developing a model for the understanding of societal entrepreneurship and its connection to entrepreneurship theory. From this point of departure a case of a regional innovation incubator has been preliminary analyzed as an example of a societal entrepreneurial profiled incubator in order to illustrate the theoretical discussion. Particularly the role of networking, federating and partnering in the en-

trepreneurial efforts is a crucial dimension. The model development as well as the case study should be seen as provisional. We will go further by deepening the analysis of the case as well as study other developments of science parks and incubators in the context of the PRIM collaboration. This will be done in close interaction with further conceptualizing efforts in order to better understand the dimensions of societal entrepreneurship.

References

- Gartner, W.B. (1988). "Who is an entrepreneur?" is the wrong question," *American Journal of Small Business*, Spring, 11-32.
- Gawell, M., Johannisson, B., and Lundqvist, M. (2009) *Samhällets entreprenörer* (In Swe.: Society's entrepreneurs). Stockholm: KK-stiftelsen.
- Johannisson, B (2000). Networking and entrepreneurial growth, *The Blackwell Handbook of Entrepreneurship* (Sexton, D. & Landström, H., red.). Oxford: Blackwell.
- Johannisson, B & Nilsson, A (1989). "Community entrepreneurs: networking for local development," *Entrepreneurship and regional development*, 1(1): 3–19.
- Landström, H. (2005) *Entreprenörskapets rötter* (In Swe.: The roots of entrepreneurship). Lund: Studentlitteratur.
- Penrose, E. (1959, 1959). *The theory of the growth of the firm*, 3rd ed. Oxford: Oxford University Press.
- Sarasvarthy, S. (2001). "Causation and effectuation: Towards a theoretical shift from economic inevitability to entrepreneurial contingency," *Academy of Management Review*, 26(2), 243-263.
- Shane, S., and Venkataraman, S. (2000). "The promise of entrepreneurship as a field of research," *Academy of Management Review*, 25(1), 217-225.
- Spinosa, C., Flores, F. & Dreyfus, H.L. (1997). *Disclosing new worlds. Entrepreneurship, democratic action, and the cultivation of solidarity*. Cambridge, Massachusetts: MIT Press.
- Stevenson, L., and Lundström, A. (2001). *Patterns and trends in entrepreneurship/SME policy and practice in ten economies*. Stockholm: Swedish Foundation for Small Business Research (FSF).
- Steyaert, C. & Hjorth, D. (red.) (2006). *Entrepreneurship as social change*. Cheltenham, UK: Edward Elgar.
- Steyaert, C. & Katz, J. (2004). "Reclaiming the space for entrepreneurship in society: geographical, discursive, and social dimensions", *Entrepreneurship & Regional Development*, vol. 16, May: 179–196.

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The Hot and Cold Market Impacts on Underpricing of Certification, Reputation and Conflicts of Interest in Venture Capital Backed Korean IPOs

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Abstract

This article analyses the impact of the participation of venture capital (VC) firms on underpricing in 372 businesses brought to IPO during the period 1999-2001 in KOSDAQ, Korea's second-tier stock market. We measure VC participation in terms of pre IPO share-ownership by VC firms and attempt to differentiate IPO impacts between VCs grouped in terms of their reputation. We also control for a wide range of variables which include uncertainty-inducing factors, market conditions, underwriting quality, share overhang and price revision effects. We find that pre-IPO ownership by VCs has an insignificantly negative impact on underpricing in both hot and cold markets. However in cold markets reputational effects within the VC group do matter. In those conditions the top 3 VCs and those owned by or affiliated with banks are significantly associated with lower underpricing. The same is true for the quality of underwriting. However in hot market conditions none of these effects are present.

Key words: Initial Public Offering; Underpricing; Venture Capital; Certification; Conflict of Interest; Informational Advantage

JEL Classification: G14; G20; G34

A. Introduction

Numerous studies have documented the fact that in all countries IPOs are underpriced in the short-run (Loughran, Ritter et al, 2003), In the US, this ‘underpricing discount’ has averaged over 10%, since the 1960s reaching over 65% at the height of the stock market boom in 1999-2000 (Ritter, 2005). Among the 34 countries surveyed by Loughran and Ritter, only 4 countries showed less-than-10% initial returns, with no stock markets exhibiting negative initial returns. In the course of the eighties and nineties IPOs on the Korean Stock Exchange exhibited persistent underpricing between 57% and 60%, rates much higher in the USA (Kim et al., 1995; Kim et al., 2002). On the Korean Securities Dealers Automated Quotation exchange (KOSDAQ), the secondary stock market founded in 1996, our estimates suggest that underpricing reached 280% during the period from 1999 to March 2000 and 119% from then until the end of 2001.

The pervasive nature of underpricing has been explained in a number of ways related to problems of information asymmetry. Thus it has been seen as a signalling mechanism to combat the ‘lemons problem’ (Allen and Faulhaber, 1989; Grinblatt and Hwang, 1989; Welch, 1989), as a response to the ‘winner’s curse’ faced by less-informed investors (Rock, 1986), and as a reward to investors for market information feedback (Barry, Gilson et al, 1998). In this paper, we focus on the role that reputable financial institutions may play in ameliorating these information asymmetry and signalling problems (Beatty and Ritter, 1986; Carter and Manaster 1990; Carter, Dark et al, 1998; Logue, Rogalski et al, 2002).

In this paper, we examine whether the names that these institutions associate with IPOs makes the IPO rose smell sweeter to investors. Put more prosaically and specifically we analyse the impact on underpricing of the participation of venture capital (VC) firms in 372 firms brought to IPO during the period 1999-2001 in KOSDAQ. Korea’s second-tier stock market, KOSDAQ, has grown dramatically since 1999 and about half of the firms listed in KOSDAQ during this period were VC-backed, thus providing a good testing ground for empirical analysis. We measure VC participation in terms of pre IPO share-ownership by VC firms and attempt to differentiate IPO impacts between VCs grouped in terms of their reputation (measured by their dominance of the VC market, and by their affiliation in terms of ownership by banks and security companies). In estimating impacts we control for a wide range of variables which may affecting the extent of underpricing. These include uncertainty inducing factors such as the age, size, profitability, leverage, and technical riskiness (measured by sector and R&D intensity) of the firm brought to IPO. We also control for market conditions using proxies for hot and cold market effects based on the numbers of contemporaneous IPOs, underpricing trends and market price movements. Finally in addition to allowing for the impact of underwriting quality we control for share overhang and price revision effects. We find that, controlling for other relevant factors, pre-IPO ownership by VCs has an insignificantly negative impact on underpricing in both hot and cold markets. However in cold markets reputational effects within the VC group do matter. In those conditions the top 3 VCs and those owned by or affiliated with banks are significantly associated with lower underpricing. The same is true for the quality of underwriting. However in hot market conditions none of these effects are present.

The article is organised as follows. In Section B, we review the literature regarding underpricing. Section C describes the data set and discusses the methodology to be used. Section D describes the main characteristics of our IPO samples and reports the results of

univariate tests on underpricing. Section E reports the results of multivariate analysis of underpricing. Section F concludes.

B. Hypothesis Development

B.1. Information Asymmetry Underpricing and Irrational Behaviour

The dominant approach to the analysis of underpricing centres around problems of information asymmetry and problems of signalling. For example, to separate themselves from the lower-quality issuers who bring ‘lemons’ to the market, it has been argued that higher quality issuers who are better informed than investors will price the IPO below its true value. Lower quality issuers will find it hard to imitate. This kind of signal can be reinforced by the announcement of high dividends (earnings) after IPO (Allen and Faulhaber, 1989), ensuring positive analyst coverage (Chemmanur and Fulghieri 1998), future issuing activities by selling additional shares on more favourable conditions (Welch, 1989), and retained ownership (Grinblatt and Hwang, 1989). In the latter case issuers are able to get back the costs of IPO underpricing by selling the shares they retained at a higher price after IPO. Alternatively when some investors have better or different information than others, IPO stocks may be also be underpriced to maintain the market. Thus in Rock’s (1986) “winner’s curse” model, well-informed investors will only subscribe to issues that are sufficiently underpriced relative to the firms’ true value to earn an abnormal return. Less-informed investors will be allocated all of the undesirable relatively overpriced issues avoided by well-informed investors. The less informed group will withdraw from the market unless underpricing is available to offset this ‘winners curse’ risk. Where issuers want to obtain information about market demand and the “bookbuilding” method is used for setting the offer price, issuers may underprice IPOs to induce regular investors to reveal their information about their truthful valuations on the firms. (Benveniste and Spindt, 1989). When revealed market demand is high, the offer price will be set higher than the original price. The price that investors extract to supply this information will however be either underpricing and/or higher share allocation (Ritter, 1998; Chang and Kim, 2006).

It is important to note that these approaches are fundamentally based around notions of rational behaviour by stock market actors. The growth in underpricing associated with the stock market boom of the 1990’s has led to other explanations in which underpricing is interpreted as the outcome of irrational behaviour. Thus Aggarwal and Rivoli (1990) argue that high levels of underpricing are caused by “market fads” which can be defined as temporary overvaluation of firms by investors in the early IPO stage. Higher levels of noise trading are likely to happen not in accordance with rational expectation on the firms’ value, but according to irrational over-optimism. Similarly Rajan and Servaes (1997) attribute higher underpricing in bull markets to over-optimism about earnings potential and long-term growth prospects which may become self reinforcing through contagion effects and changes in bookbuilding behaviour (Loughran and Ritter (2002) and Lowry and Schwert (2002)) Empirical analysis of the determinants of underpricing must therefore be sensitive to the market background against which they occur not least to avoid aggregation biases by combining observations over differing market conditions.

B.2. Information Asymmetry Certification and Reputation Effects: Advisers, Venture Capitalists and Underwriters

B.2.1 Auditors Financial Advisers and Underwriter Quality

An important strand of the signalling literature emphasises the information content of “reputation” and the role that certain institutions involved in the issuing process can play in certifying the quality of firms brought to IPO. Here issuers attempt to alleviate the degree of information asymmetry by signalling quality through the use of highly prestigious underwriters, auditors or financial advisors in the process of IPO. Titman and Truman (1986) suggest that the employment of a prestigious auditor or other financial advisors to the issuing company may be interpreted by investors as a positive signal of issue value, leading to less underpricing. Holland and Horton (1993) examine the relation between the reputations of the professional advisors involved in IPO (specifically, the sponsor, the accountant and the auditor) and short-term performance. They find that more reputable financial advisors are linked to lower initial returns. Similar results obtain for underwriter quality (Kim, Kish and Vasconcellos, 2002; Carter, Dark et al, 1998; Carter and Manaster, 1990)

B.2.2 Venture Capitalists: Certification and Conflicts of Interest Effects

In addition to the reputational effects of financial advisers a significant literature has focussed on the role of venture capitalists (VCs) in certifying and hence signalling IPO quality. This literature has also focussed on potential conflicts of interest which may arise as a result of venture capital involvement when venture capital firms are affiliated with other institutions involved in underwriting or investing in IPO firms (Barry, Muscarella et al., 1990; Megginson and Weiss, 1991; Admati and Pfleiderer 1994; Espenlaub, Garrett et.al., 1999; Francis and Hasan, 2001; Gompers and Lerner, 1999; Gompers, 1996; Chan, Siegel et al., 1990; Bessler and Kurth, 2003; Hamao, Packer et al., 2000; Hellman and Puri 2000a, 2000b; Jain and Kini, 2000; Rindermann, 2002; Lee and Wahal, 2004; Li and Masulis, 2003).

Certification Effects

The certification role of VC involvement in IPO firms is linked to the various features of their practice which may signal that the firms they invest in are of relatively high quality. As a result to attract investors at IPO they require less money to be left on the table through underpricing. This effect is based on the use of various investment control and resource allocation mechanisms designed to reduce the risks associated with start up businesses especially in the high return technology based sectors deemed to be attractive to VCs and in which venture capitalists often invest through risk spreading syndicates in which one or more venture capitalists play the leading role (Admati and Pfleiderer, 1994; Lerner, 1994). VC backed IPOs, it is argued, will be of higher quality or lower uncertainty in performance because of VC investment and monitoring and support strategies for their portfolio firms. These strategies include staged financing linked to performance and convertible debt instruments for effective monitoring and incentive alignment. (Sahlman, 1990; Gompers, 1995; Gompers and Lerner, 1996; Cornelli and Yosha, 1997). In addition firm quality may be improved by specialist strategic VC guidance, identification and recruitment and incentivisation of top management, and by specialist VC network support (Kortum and Lerner 1998; Hellmann and Puri, 2000a; Stuart, Hoang et al. 1999). Finally it is argued that

venture capitalists have an incentive to bring good quality firms to IPO because they are “repeated players” in the IPO market who require IPO to exit their investments. As a result venture capitalists will invest in careful screening, selecting and monitoring of investee firms, to avoid losing their reputation by taking the poorly qualified firms to the IPO market (Espanlaub and Garrett, 1999; Jain and Kini, 2000).

For all these reasons it might be expected that in the Korean stock market, venture capitalists’ involvement in the ownership of IPO firms will send a positive signal to the capital markets. In a stock market such as KOSDAQ, which has a short track record, public investors will, it could be argued, have less accumulated information about the high-technology focused IPOs that prevailed during the period of our research. In our empirical analysis, if these effects predominate we would expect venture capital-backed IPOs to be less underpriced, compared with IPOs which are not backed by venture capital.

Heterogeneity in VC Quality, VC affiliation and Conflicts of Interest

While there is a body of literature proposing the certifying role of venture capitalists, another body of literature stresses potential offsetting effects arising from heterogeneity amongst venture capital firms and from conflicts of interest.

Gompers (1996) observed that venture capitalists caught up in rising markets would bring firms to market prematurely to satisfy their need for exit even if this timing was less than appropriate given the maturity of the business. Thus in rising markets the certifying role is weakened. He also observed that within the VC sector newer venture capitalists were, in general, more prone to do this. This behaviour termed ‘grandstanding’ leads younger VC companies to bring IPOs to the public market earlier than more established firms in order to raise their own profile. IPOs sponsored by inexperienced and younger venture capitalist should therefore be more underpriced.

Korea’s venture capitalist market has a relatively short history. The majority of firms were established after the regulatory changes in 1998, which were designed to encourage the foundation of more venture capital companies in order to promote technology financing. The likelihood of grandstanding effects may therefore be substantial. In addition, variation in venture capital quality are likely to be present so that the impact of venture capital presence on underpricing is likely to be influenced by investor perceptions of VC quality. Of around Korean 120 venture capital companies, only around 20 appear in the ownership section of the IPO prospectus of IPO firms. Thus leadership in terms of market share may be taken as a signal of VC quality.

In a market in which historically a few key banks and security firms have dominated affairs and have established reputations VC affiliation with them may lead to less underpricing than when these affiliations are not present. Thus IPOs backed by venture capitalist firms which differ according to their ownership may have different impacts on underpricing. (Gompers and Lerner, 1999; Hamao, Packer et al., 2000; Li and Masulis, 2003; Bessler and Kurth, 2003).

Conflicts of interests arise when these affiliations lead to differences in motivation in IPO pricing and where financial market structures lead to multiple interconnections between investment banking, underwriting and venture capital functions and the role of institutions as both investors and promoters of IPOs. Gompers and Lerner (1999) focus on the conflicts of interest that can occur between underwriters who hold an equity stake in IPO firms through venture capital subsidiaries and investors. They note the possibility that, when investment

banks (security firms in the Korean context) underwrite IPO businesses in which they have shares through a venture capital subsidiary, they may incur conflicts of interest between investors and themselves. An investment bank (security firm) has an incentive to set a high price for IPO shares as an agent of the IPO firm. This incentive is strengthened when it has ownership rights in the IPO company. However, the investment bank (security firm) has an offsetting concern about losing its reputation by pricing the IPO firms too high and weakening its links with institutional and other investors who are their long-term clients on the demand-side. The IPO offer will be thus be the outcome of several conflicting concerns. When investors anticipate this conflict of interests, they will require a discount on the IPO pricing to reflect the uncertainty it creates, which will result in a higher underpricing. This will reinforce the self-interested tendency for underwriters to underprice in order to avoid expensive buy-ins. VC affiliation with investment banks (security firms) involved in the underpricing process should lead to higher underpricing. To the extent that the need to underprice is weakened in bull markets with typically excess demand then we would expect this effect to be weakened or offset in those circumstances. In empirical analysis, it is therefore important to both identify VCs affiliated with investment banks (security firms) and analyse effects allowing for hot and cold market conditions.

The argument for a distinct certification role of “bank-affiliated” venture capitalists depends upon their particular “information advantage” over other financial institutions based on specialist personnel linked to client fund transmission, the screening of loan applicants, monitoring client firms’ managerial performance and profits, and enforcing specific contracts that are designed to modify managerial behaviour (Hellman et.al.,2003; Calomiris and Ramirez, 1996). Banks which also hold shares in clients can reduce the agency costs associated with debt (Prowse, 1990; Aoki, 1994) and may be more willing to provide funding for long-term investment (Edwards and Fischer, 1994). As Aoki (2000) has argued relational financing in bank based financial systems makes the banks’ role in gathering information central. It generates ‘informational rents’, which in our context can be translated into positive reputational effects.

If all these certifying and value-adding functions of banks are recognised in the market, IPO firms backed by banks-affiliated venture capital companies should be expected to experience less underpricing than those which are not.

Uncertainty and Underpricing: Control and other Variables

It is well known that variables other than the outside ownership and reputational factors that we have discussed so far can affect underpricing. In particular a range of factors are associated with uncertainty in firm performance and the motivation of the original entrepreneurial owners. These may both predispose venture capitalists to focus on certain types of firms whose underlying characteristics may be reflected, in relatively high or low levels of underpricing and produce misleading estimates of the impact of VC involvement unless their impact is controlled for (Rindermann, 2002; Gompers and Lerner, 2001; Lee and Wahal, 2004; Daily et.al., 2003). Both small business size and youth are associated with uncertainty in business performance, as are high levels of leverage. Each may be expected to lead to higher underpricing (Carter et al., 1998; Ibbotson et al., 1994; Megginson and Weiss, 1991). Similarly high technology and R&D intensive businesses are more risky than other types of IPO (Guo et al., 2006) with similar implications for underpricing. Finally, pre-IPO profitability should be a positive signal of quality as should the extent to which the CEO of an

IPO firm holds equity and is committed to its retention post-IPO. Both should lead to lower underpricing although the evidence on the CEO effect is mixed (Beatty, 1989; Kim et al., 1995). We include variables for each of these effects in our empirical analysis.

In addition to these variables relating to the characteristics of the IPO firm two other variables arising from the IPO process have been identified as factors affecting the degree of underpricing. Benveniste and Spindt (1989) argue that, where the bookbuilding method is used for setting the offer price, security firms may underprice IPOs in order to induce regular investors to reveal their information about their truthful valuations of the firm. To encourage investor honesty, these firms then compensate investors by underpricing and must underprice issues for which favourable information is revealed by more than those for which unfavourable information is revealed. This leads to a prediction that there will only be partial adjustment of the offer price from that contained in the preliminary prospectus to that contained in the final prospectus. In other words, the IPOs for which the offer price is revised upwards will be more underpriced than those for which the offer price is revised downwards (Barry, Gilson et al, 1998; Loughran and Ritter, 2002).

A second factor which may be related to underpricing arises from the possibility of retaining shares which can then be used to realise gains when the after market effects have occurred (Bradley and Jordan, 2002). When underpricing occurs, undervalued shares include only the ones actually sold to investors. The insiders' retained shares are valued at aftermarket prices. Therefore, the economic cost per retained share (the dilution cost) decreases and economic gain increases with increases in 'overhang', where share overhang is defined as the ratio of pre-IPO shares retained in a firm relative to the number of shares filed for sale to the public. As a result, it is likely the firms with greater overhang will allow for greater underpricing. In a related vein Loughran and Ritter (2002) argue that when underpricing occurs, insiders recognise that share value has been diluted. However, these same insiders also generally experience an unexpected increase in wealth. Accordingly, the existing shareholders are willing to "leave money on the table" for new shareholders, when the wealth impact can more than offset the dilution as overhang rises. Once again it is expected that higher overhang is associated with higher underpricing.

We therefore allow for both price revision and overhang effects in our empirical analysis.

C. Data and Variables

C.1. Data Sources

Our primary source are the IPO prospectuses of 372 going public firms filed with the Korean Financial Supervisory Service (FSS) prior to IPO¹. The IPO prospectuses include data on market capitalisation; gross spreads; underwriting costs; the name of the underwriter; the history, business and operation of the firm; the ownership structure at the time of IPO; names of venture capital companies that participated in the ownership and the number and percentage of shares they own. IPO firms must report the identity and the shareholdings of venture capitalists (and other large shareholders) if they hold at least 5% of the total shares at

¹ We do not consider in this paper venture capital investments realised by M&A or other exit routes other than IPO.

IPO². In addition to data from the prospectuses we used data generously supplied by FSS on the turnover underwriting activities of Korean security firms for the period of 1998~2000, which enabled the calculation of their market shares in the Korean IPO which we use as reputation indicators.

Daily stock prices for each IPO firm were generously supplied by Tong-Yang Securities Co who also made available annual financial statements for the IPO firms.

The IPO offer price of each IPO firm and the daily KOSDAQ index were supplied by KOSDAQ. The Korean Stock Exchange provided us with daily KOSPI (Korea Stock Price Index) data. The IPO numbers in each year in KOSDAQ and KSE were obtained from the annual report published by the Korea Securities Dealers Association (KSDA) and the KOSDAQ website (<http://www.kosdaq.or.kr>). Information on the institutional identity of each venture capital company, i.e., the parent investor of the venture capital company was generously provided by the KVCA (Korean Venture Capital Association). The two-digit Korean Industry Classification (KIC) codes that we use to classify the 372 firms into various industry groups were obtained from the website of Ministry of Commerce, Industry and Energy (<http://www.mocie.go.kr>).

C.2. The Calculation of Initial Returns

To estimate the effect of underpricing, initial returns are generally calculated as price change from the offer price to the first day closing price of the IPO stock (Barry, Muscarella et al, 1990; Megginson and Weiss, 1991).

However, the closing price on the first day is not an appropriate measure for calculating initial returns in our KOSDAQ samples, because in our sample period KOSDAQ regulated daily price movements to stay within a band of plus or minus 12% until July 24 2000, and within 100% from July 25 2000. In many IPOs the closing price on the first day of trading reaches these upper limits. Moreover it often keeps on hitting the daily limit for several days in a row. (Kim and Park, 2002; Berkman and Lee, 2002). Therefore, instead of using the first-day return as the initial return (underpricing), we calculate it as the difference between the offer price and the closing price on the first day that the IPO stock did not hit the daily upper limit (Kim and Park 2002). Since the return is calculated over several days we adjust it by the movement in the KOSDAQ index between the first day of trading and the first day that the IPO stock did not hit the daily upper limit. Accordingly, the initial return is defined as

$$IR_{it} = \frac{P_{it} - P_{i0}}{P_{i0}} - \frac{KQ_{it} - KQ_{i0}}{KQ_{i0}}$$

Where P_{i0} is the offer price of an IPO firm i , P_{it} is the closing price on the first day that the IPO firm did not hit the daily upper limit, KQ_{i0} is the KOSDAQ index on the first day of the IPO stock trading, and KQ_{it} is the KOSDAQ index on the first day that the IPO firm did not hit the daily upper limit.

² If the venture capitalists invest less than 5% in the IPO firm they do not appear in the ownership section of the IPO prospectus. Where the venture capitalists own less than a 5% share of an IPO firm, the firm is classified as 'non-VC-backed' in our analysis. Holdings of less than 5% may indicate that the venture capitalists are not interested in the management of the IPO firm as minor shareholders. In this case, they are considered as not contributing to the certification of the firm or adding value.

C.3. Variables

Measures of VC-Backing and VC Reputation

The presence of VC-backing for an IPO is proxied by a dummy variable (*VC*) which takes the value of 1 when a venture capital company has at least a 5% shareholding. To pick up reputational effects we design a dummy variable which has the value of 1 when one of the “Big Three” venture capital companies [Korean Technology Bank (KTB), Korean Technology Investment (KTI), Korean Development Bank Capital (KDBC)] backs an IPO firm as the lead venture capitalists³.

Measures of Institutional Affiliation

We devise two mutually exclusive dummy variables that take the value of 1 if the lead venture capitalist of an IPO firm is affiliated respectively with a bank or investment bank (security company). Furthermore, in order to capture the effect of direct bank ownership and security firm ownership in an IPO firm respectively we compute two further dummy variables. The first takes the value of 1 when there is one or more significant bank shareholdings (i.e. 5% or over) in the IPO firm at the offer date and zero otherwise, and the second takes the value 1 when at least one investment bank (security company) has a significant share ownership in the IPO firm and zero otherwise⁴.

Underwriter Reputation

Following Megginson and Weiss (1990) and Beatty (1989) we construct a dummy variable set equal to 1 when the underwriter is one of the largest 3 underwriters in Korea and set equal to zero otherwise⁵.

IPO Firm Related Uncertainty

To control for size effects, we employ the natural logarithm of gross proceeds. In a similar way, to control for age effects, we employ the natural logarithm of age at the time of IPO. We also include as variables the shareholdings of the CEO, profitability (EBIT / total assets), the liquidity ratio (total debt / total asset), and R&D intensity (R&D expenditure / total asset) either at or in the last accounting period prior to IPO. High technology sector effects are captured by a dummy variable which equals to 1 if an IPO firm belongs to a high-tech industry and zero otherwise⁶.

Hot and Cold Stock Market Effects

To capture stock market effects, we employ three variables: the number of all IPOs in KOSDAQ in the last month prior to an IPO, the average level of underpricing of the last three

³ KTB, KTI and KDBC, account for the majority of Korean venture capital financing.

⁴ There were no cases in the sample when both a security firm and a bank held a significant shareholding as defined in this study.

⁵ The big three underwriters Investment and Security, Daishin Securities and Samsung Securities Co. account for over 50% of the market where we measure the market share by dividing the whole gross proceeds of the IPO firms sponsored by an underwriter by the sum of the gross proceeds of all the IPO firms.

⁶ The classification of high-tech industry and non-high-tech industry follows that in Loughran and Ritter (2001). The high-tech industries include Other Machinery and Equipment (Korean Industry Classification Code 29), Computers and Office Machinery (30) Electrical Machinery and Apparatuses (31) Electronic Components, Radio, Television (32) Medical, Precision and Optical Instruments (33), Computer and Related Activities (72).

IPOs prior to a sample IPO, and the 20-day cumulative market index return prior to IPO. These variables are expected to have a positive relationship with underpricing. We also divide our sample period at March 2000 and carry out univariate and multivariate analyses for the whole period and each of these subperiods up to and following the end of that month.

Share overhang and Price Revision

We measure share overhang as the ratio of pre-IPO shares retained in a firm relative to the number of shares filed for sale to the public. We measure price revision as the ratio of change from original offer price to final offer price.

D. Univariate and Bivariate Analysis

D.1. IPO Firms: The Characteristics of VC and Non-VC backed IPOs

Table I provides a detailed analysis of the characteristics of the IPO firms grouped by VC-backed and non-VC-backed status. In Panel A, a comparison of the size and age of the firms shows that VC-backed IPOs are smaller and younger than those of non-VC-backed IPOs. The age of firms of VC-backed IPOs is, on average, 9.6 years, whereas that of non-VC-backed IPOs is 14.2, with the difference being significant at the 1% level under both the parametric and non-parametric tests. VC-backed firms also have significantly younger CEOs (47.7 years) than non-VC-backed firms (53.0 years). The smaller size of VC-backed firms over non-VC-backed IPOs is reflected in various types of size-related figures: total assets, total debt, turnover, EBIT, and number of employees all of which are significantly different between the groups. For instance, the total asset size of VC-backed IPOs (17.5 BW⁷) is significantly lower than that of non-VC-backed IPOs (78.4 BW) and the turnover of VC-backed IPOs (22.1 BW) is less than a third of that of non-VC-backed IPOs (67.0 BW) and they also have lower total profits measured as earnings before tax and interest (EBIT). They are however more profitable in the last year before IPO (EBIT / Total asset: 15.4% vs. 13.8%). There is, however, not a statistically significant difference in leverage (Total debt/Total asset) or in number of members of the board of directors between the groups. The R&D investment of VC-backed IPOs (843.1 MW) is significantly higher than that of non-VC-backed IPOs (672.9 MW) on the basis of the non-parametric test. Not surprisingly this result combined with the fact that VC-backed IPOs are as we have seen relatively small means that they have significantly higher R&D intensity. Thus their R&D / Total Asset ratio is 7.7% compared with 2.8% for non-VC-backed IPOs. This difference no doubt reflects in part the fact that venture capital backing was more prevalent in high-tech industries such as electronics and ICT which tend to have higher R&D investment than other low-tech industries.

Our univariate analysis also shows that VC-backed IPO recorded higher initial returns compared to non-VC-backed IPOs. The average initial return of VC-backed IPOs, was 202.3%, while that of non-VC-backed IPOs was 149.3%. This difference is significant at 10% on both a parametric and non-parametric basis. However, the presence of the differences between these groups of IPOs in terms of size and age in particular means that we would expect these inter-group differences to reflect in part at least the higher uncertainty of the VC

⁷ BW: Billion Won, MW: Million Won

backed group, and the importance of allowing for these effects in our multivariate regression analysis.

[Insert Table I]

Panel B compares offering statistics between VC-backed IPOs and non-VC-backed IPOs. As might be expected from panel A, VC-backed IPOs have smaller market capitalisation volume and gross proceeds than non-VC-backed IPOs. Thus the market capitalisation (offer price multiplied by the number of shares offered), of VC-backed IPOs (54.8 BW) is significantly smaller than that of non-VC-backed IPOs (98.4 BW) and the proceeds figures show that VC-backed IPOs attracted a lower amount of money at IPO (11.6 BW) than non-VC-backed IPOs (16.5 BW). Given these smaller gross proceeds, VC-backed IPO firms paid less underwriting fees (368.8 MW) relative to non-VC-backed IPOs firms (374.3 MW). The lower book-to-market ratio of VC-backed IPOs (0.3) relative to non-VC-backed IPOs (0.6) reflects the findings in Panel A that VC-backed IPOs recorded greater initial returns than did non-VC-backed IPOs. Non-VC backed IPOs were less costly in terms of underwriters fees in both absolute terms and relative to gross proceeds although only the latter difference was statistically significant. Both the overhang and price revision variables are significantly higher for VC backed IPOs. Since we expect both these variables to also be associated independently with underpricing, it is important to allow for their impact in identifying the impact of VC backing per se.

D.2 .The Ownership Structure of VC backed and Non –VC backed IPO firms

Table II is based on an analysis of shareholdings of 5% or more in VC backed and Non-VC backed groups of IPO firms at the date of the offering as disclosed in the IPO prospectus. We separately identify seven types of holder; CEO, CEO family, board of directors as a whole, venture capitalists, other industrial companies (corporate venture holders) commercial banks, and investment banks (security firms).

By construction the VC backed group has a higher proportion of VC holdings. In both groups of IPOs, however, the largest single significant shareholder is the CEO and there is no difference between the groups in the typical size of this holding which accounts for just less than a third of all the shares. In the case of VC backed IPOs, this is, on average, twice the typical VC holding of 15.1%. This latter figure is quite low, when compared with the average holding of US venture capitalist at IPO (holdings of over a third are for instance reported in Megginson and Weiss (1991)). Board of directors holdings excluding the CEO do not differ significantly between VC-backed IPOs (7.8%) and non-VC-backed IPOs (9.7%). However, the average shareholdings of the CEO's family does show a significant differences (6.1% for VC-backed IPOs, 13.0% for non-VC-backed IPOs). As a result the sum of shareholdings of CEO, CEO family and the Board does differ significantly (VC-backed IPOs (46.2%) and non-VC-backed IPOs (54.4%))

[Insert Table II]

Corporate stakes accounted for only 5.2% of total shareholdings of VC-backed IPOs compared with 14.0% of those of non-VC-backed group. This difference is significant at the

1% level. Banks and security firms have small holdings of 2% or less and the differences between the groups are significant only on the basis of a non-parametric test suggesting higher bank holdings in VC-backed-IPOs. Non-VC-backed firms appear therefore to be more closely held in family terms and have higher holdings by other non-financial companies in their equity.

D.3. Underpricing: The effects of VC-backing, market conditions, age, size and sector

Table III compares underpricing between VC and Non-VC backed firms, stock market conditions, firm age, firm size and the sector of the IPO. The first row replicates, for comparison purposes, our overall underpricing result from Table I.

Table III shows that IPO firms brought to the stock market in the hot issue period (up until March 2000) recorded significantly higher initial returns (2.80) on average than those (1.19) in the cold issue market (after March 2000). This result clearly shows that initial returns are closely correlated with market conditions, as argued in Ibbotson, Sindelar et al. (1994) and Lowry and Schwert (2002). Market conditions thus seem to influence the initial returns in the bank-based Korean system much as in other stock market based financial systems.

The initial returns of young firms (2.05) are statistically significantly higher those than of old firms (1.43). This is consistent with the view that investors require a greater risk premium for young firms that generally have more uncertain prospects than established firms. The average initial return of the small market capitalisation group (1.98) also turns out to be statistically significantly higher than that of large market capitalisation group (1.50). This evidence also appears to show that investors demand a higher risk premium on the IPOs of small firms that are recognised as more uncertain and risky than big firms.

[Insert Table III]

There is, however, no significant difference in initial returns for high-tech and non-high-tech companies. The underpricing of the high-tech industry group is 1.77, compared with 1.70 for the non-high-tech group. This is an interesting result, because high-tech stocks (especially relating to information and communication technology) showed a higher initial return than non-high-tech stocks in late 1990s and the first-quarter of 2000 in the US (Schultz and Zaman, 2001).

D.4. Underpricing by VC-backed and non-VC-backed IPOs: Bivariate Analysis

In this section, we display a bivariate analysis of underpricing by VC-backed IPOs and non-VC-backed IPOs respectively cross-classified by market condition, age, market capitalisation and industry.

Panel A of Table IV shows that the initial return of VC-backed firms is statistically significantly higher in the hot market (3.61) than in the cold market (1.11). Although the initial return of non-VC-backed firms is also higher in the hot market (2.00) than in the cold market (1.25), the difference of the initial returns is not as severe as in the case of VC-backed firms. But, the difference is still significant at the 5% level. This tendency for the initial return to be higher in the hot market regardless of VC-backing clearly shows that the high

initial returns of the whole sample in KOSDAQ might be driven by the overreaction of investors in the hot market (Kim and Park, 2002). However, the final two rows of Panel A show that VC backed firms were significantly more underpriced than Non-VC backed firms in only the hot market. VC backing has no significant impact in the cold period. In Panel B, young firms show higher returns than old firms in both VC-backed and non-VC-backed IPOs. The initial return of young firms in the VC-backing group is 2.37, compared with 1.41 of old firms in the same group. The difference of the initial returns is significant at the 5% level using the t-test. For non-VC-backed firms, the difference of initial returns between young firms (1.58) and old firms (1.44) is no less acute than the case of VC-backed firms, but the difference is only significant at the 10% level using the Mann-Whitney test. The final two rows of Panel B show, however, that VC backing only has an effect on underpricing within the younger group. It does not appear to have an impact amongst older firms. In Panel C, we find that small firms have statistically significantly higher underpricing than large firms for both the VC-backed and the non-VC-backed firms. Moreover, as the results in the final two rows of the Panel show VC backing is associated with higher underpricing irrespective of size.

[Insert Table IV]

Finally, Panel D shows insignificant differences in the average initial return between high-tech firms and non-high-tech firms whether or not they are VC backed. However, within the high-tech group there is significantly higher underpricing in the VC-backed group. Thus the VC backed group are associated with those high tech IPOs displaying the highest initial returns.

D.5. Underpricing by Types of Institutional Affiliation of the VC-backers of IPO firms

Table V repeats the analysis of the previous section but this time in the context of testing for differences *within* the VC backed group distinguishing between bank-affiliated VC-backed IPOs, security company-affiliated VC-backed IPOs, other institution-affiliated VC-backed IPOs (excluding bank-affiliated and security company-affiliated) and non-VC-backed IPOs⁸. The initial returns are compared among these four groups for all IPO firms, cross classified by whether their IPO firms were brought to market in the hot or cold market periods, respectively.

The first row of Table V shows that the initial return of the bank-affiliated group is 2.33, followed by 2.06 of the other institution-affiliated, 1.49 for the non-VC-backed and 1.29 for the security company-affiliated group. The difference of the initial returns is, however, significant only between other institution-affiliated VC and non-VC-backed. There is thus no evidence of certifying effects on this basis.

[Insert Table V]

⁸ In this and following tables where comparisons are made across more than two categories we use the non-parametric Kruskal-Wallis test. If, and only if, this test reveals the presence of statistically significant differences across the groups as a whole a simple extension permits a series of tests of all pair wise comparisons across the groups (Conover, 1980, pp 229-237). The results of such pair wise tests are reported accordingly.

The second panel shows that in the hot market bank-affiliation is statistically significantly associated with higher underpricing than in any of the other three groups. The final panel shows that there are no significant differences in the cold market. The final row of the Table shows that for each group of VC firm except for those which are investment bank (security firm) affiliated, underpricing was higher in the hot than the cold market, so all these groups were affected in the same direction by the market conditions.

E. Multivariate Analysis

E.1. Multivariate Regression Models

We construct three regression models. In estimating each we regress independent dummy variables capturing VC backing effects and our other reputation ownership and control variables against underpricing (initial returns). Model 1 tests for the impact of VC-backing. Model 2 tests for the impact of VC-reputation. Model 3 tests for the institutional affiliation of VC-backing. Each of the three regressions is estimated with a constant term and include the variables controlling respectively for the effect of IPO company characteristics, offering characteristics and stock market conditions. All results presented are shown with heteroskedastic robust standard errors. The three regression models are estimated for three time periods: the whole sample from April 1999 to end September 2001; the hot market sub period from April 1999 to end March 2000; the cold market subperiod from April 2000 to September 2001.

E.2. Results

In Table VI, in the whole sample taking all three regression models together we find that none of the VC reputational backing or affiliation variables has a statistically significant effect upon underpricing. Thus in a multivariate context for the whole period the univariate findings of VC related certifying or reputational effects disappear. Only the investment bank (security company) affiliated indicator shows an impact that is statistically significant. It is however the opposite of that predicted by the literature since in Model 3 its presence reduces underpricing. Underwriter reputation has an insignificantly but correctly signed negative impact.

As far as the control variables are concerned, a number of clear findings emerge. Age and gross proceeds are significantly negatively related to underpricing in all three model specifications. The age and size results are thus consistent with the negative impact of maturity and scale on underpricing as a result of lower uncertainty. CEO stake is also negatively related to underpricing in some runs but becomes insignificant when other share ownership variables are added. The table also shows that proximate stock market conditions are closely related to underpricing. The cumulative market index return has a strong positive relationship with underpricing. As was also expected, offer price revision is positively related to underpricing at the 1% level. Overhang has no effect. Cumulative share price movements have the expected positive sign and are significant, whilst contemporary pricing movements are, as predicted, positive but insignificantly so. Profitability leverage and R&D also have the expected signs but are statistically insignificant.

[Insert Table VI]

Disaggregating the results by time period yields important differences and suggests that the overall period results aggregate across two rather different market regimes. In Table VII covering the hot market period, the regression results for the VC backing, affiliation and reputational variables are generally consistent with those of the whole market period yielding insignificant effects. Once again the investment bank (security company) variable is statistically significantly negatively related to underpricing. Stock market situation variables are as before also positively related to underpricing. The cumulative market index return is very strongly related to the underpricing (coefficients ranging from 4.74 to 4.85 with t-statistics from 2.16 to 2.22). Price revision is also found to have a strongly positive relationship with underpricing. Amongst the control variables, the most notable change is the increased value and significance of the coefficients on age. In hot market conditions it appears that maturity becomes a more potent indicator of reduced uncertainty. Size, on the other hand, becomes insignificant. The other variables are similar in size and significance as they were for the whole period estimation.

In the cold market period results shown in Table VII, the most striking change in the regression results is in the behaviour of the VC ownership variable. Although the significance of VC-backing per se remains insignificant in Model 1, in the other two models, the VC-reputation and bank-affiliated VC variables exhibit significantly negative coefficients. Bank shareholding is also found to reduce underpricing at the 10% level. Security company affiliation effects disappear whilst the underwriter reputational variable becomes significant and with the expected negative sign. It thus appears that in the more stable conditions of the cold market there are as predicted by the certification and reputation models significant effects leading to reduced underpricing linked to bank affiliated VC backing, VC reputation and underwriter reputation.

The main changes in the other variables are that age and size have the correct negative signs as uncertainty reducing factors although in this case it is size which is statistically significant. The price revision positive impact is reinforced as is the impact of the proximate stock price movement variables. The number of IPOs in the previous month becomes significantly negative.

[Insert Table VII]

It seems that, in hot market contagion conditions where the demand for shares exceeds the supply, the certifying and reputation effects predicted to be associated with VC backing and various reputational variables associated with underwriter reputation and bank backing count for nothing. There is nothing in a name and any IPO rose smells just as sweet. A name does not matter in hot markets. In the cold market, the scope for a reputable financial player's name to sweeten an IPO rose can lower the degree of underpricing (Carter and Manaster, 1990). The significantly negative relationship of bank-affiliated VC, VC reputation and underwriter reputation to underpricing in cold markets is thus consistent with the predictions of the reputational and certifying predictions of the information asymmetry models. These models do not hold however in the hot market.

F. Conclusion

In this paper we tested the propositions that VC-backing, the reputation of venture capitalists and the institutional affiliation of VC-backers would reduce IPO underpricing. We tested these propositions on a large sample of IPOs on KOSDAQ over the period of 1999~2001. Our analysis controlled for a wide range of control and other variables that affect underpricing and we distinguished two sub-periods of analysis corresponding to hot and cold market conditions. We found that the hypothesized venture capital participation and reputational effects occurred only in cold market conditions and that the whole period results represented the aggregation of two rather different regimes. In the hot market, it appears that names make very little difference as everyone is swept up in the contagion. Only maturity and investment bank (security company) backing afforded any downward pressure on underpricing, and overall underpricing was at its peak. In the cold market behaviour more consistent with the conventional asymmetric pricing models emerges the name does matter.

Bibliography

- Admati, A. R. and Pfleiderer, P., 1994, Robust Financial Contracting and the Role of Venture Capitalists, *Journal of Finance*, 49, 371-402.
- Aggarwal, R. and P. Rivoli, 1990, Fads in the initial public offering market?, *Financial Management*, 19, 45-57.
- Allen, F. and Faulhaber, G., 1989, Signalling by Underpricing in the IPO Market, *Journal of Financial Economics*, 23, 303-323.
- Aoki, M., 2000, *Information, corporate governance, and institutional diversity: competitiveness in Japan, the USA, and the transitional economies* (Oxford: Oxford University Press).
- Aoki, M. and Patrick, H., 1994, *The Japanese main bank system: its relevance for developing and transforming economies* (Oxford: Oxford University Press).
- Barry, C. B., Muscarella, C. J., Peavy III, J. W. and Vetsuypens, M. R., 1990, The Role of Venture Capital in the Creation of Public Companies: Evidence from the Going Public Process, *Journal of Financial Economics*, 27, 447-471.
- Barry, C., Gilson R., and Ritter, J. R., 1998, Initial Public Offerings and Fraud on the Market, Working Paper, Texas Christian University, Stanford University and University of Florida.
- Beatty, R., 1989, Auditor Reputation and the Pricing of IPOs, *Accounting Review*, 64, 693-709.
- Beatty, R. and Ritter J. R., 1986, Investment Banking, Reputation, and the Underpricing of Initial Public Offerings, *Journal of Financial Economics*, 15, 213-232.
- Benveniste, L. M. and Spindt, P. A., 1989, How Investment Bankers Determine the Offer Price and Allocation of New Issues, *Journal of Financial Economics*, 24, 343-362.
- Berkman, H. and Lee, J. B. T., 2002, The Effectiveness of Price Limits in an Emerging Market: Evidence from the Korean Stock Exchange, *Pacific-Basin Finance Journal*, 10, 517-530
- Bessler, W. and Kurth, A., 2003, The Performance of Venture-Backed IPOs in Germany: Exit Strategies, Lock-up Periods, and Bank Ownership, European Financial Management Association 2004 Basel Meeting Paper.
- Bradley, D. J. and Jordan, B. D., 2002, Partial Adjustment to Public Information and IPO Underpricing, *Journal of Financial and Quantitative Analysis*, 37, 595-616.
- Calomiris, C. W. and Ramirez, C. D., 1996, Financing the American Corporation: The Changing Menu of Financial Relationships, NBER Working Papers, National Bureau of Economic Research H0079.
- Carter, R., Dark, F. and Singh, A., 1998, Underwriter Reputation, Initial Returns, and the Long-Run Performance of IPO Stocks, *Journal of Finance*, 53, 285-311.
- Carter, R. and Manaster, S., 1990, Initial Public Offerings and Underwriter Reputation, *Journal of Finance*, 45, 1045-1068.
- Chan, Y. S., Siegel, D. and Thakor, A. V., 1990, Learning, Corporate Control and Performance Requirements in Venture Capital Contracts, *International Economic Review*, 31, 365-381
- Chemmanur, T. and Fulghieri, P., 1998, A Theory of the Going-Public Decision, *Review of Financial Studies*, 12, 249-279,
- Conover, W. J., 1980, *Practical Nonparametric Statistics* (John Wiley & Sons, New York).

- Cornelli, F. and Yosha, O., 1997, Stage Financing and the Role of Convertible Debt, Discussion Paper, Centre for Economic Policy Research 1735.
- Daily, M. D., Trevis Certo, S., Dalton, D. R. and Roengpitya, R., 2003, IPO Underpricing: A Meta-Analysis and Research Synthesis, *Entrepreneurship Theory and Practice* Spring, 271-295
- Edwards, J. and Fischer, K., 1994, *Banks, Finance and Investment in Germany* (Cambridge: Cambridge University Press).
- Espenlaub, S., Garrett, I. and Wei, P. M., 1999, Conflicts of Interest and the Performance of Venture-Capital-Backed IPOs: A Preliminary Look at the UK, *Venture Capital*, 1, 325-349.
- European Venture Capital Association, 2001, *EVCA 2000 Yearbook*.
- European Venture Capital Association, 2002, *EVCA 2001 Yearbook*.
- European Venture Capital Association, 2003, *EVCA 2002 Yearbook*.
- Field, L. and Hanka, G., 2000, The Expiration of IPO Share Lockups, *Journal of Finance*, 56, 471-501.
- Francis, B. B. and Hasan, I., 2001, Underpricing of Venture and Non Venture Capital IPOs: An Empirical Investigation, *Journal of Financial Services Research*, 19, 99-113.
- Gompers, P. and Lerner, J., 1996, The use of covenants: An empirical analysis of venture partnership agreements, *Journal of Law and Economics*, 39, 463-498.
- Gompers, P. and Lerner, J., 1999, Conflict of Interest in the Issuance of Public Securities: Evidence from Venture Capital, *Journal of Law and Economics*, 42, 1-28.
- Gompers, P., 1995, Optimal Investment, Monitoring, and the Staging of Venture Capital, *Journal of Finance*, 50, 1461-1489.
- Gompers, P., 1996, Grandstanding in the Venture Capital Industry, *Journal of Financial Economics*, 42, 133-156.
- Gompers, P., and Lerner, J., 2001, *The Money of Invention: How Venture Capital Creates New Wealth* (Boston: Harvard Business School Publishing).
- Grinblatt, M. and Hwang, C., 1989, Signalling and the Pricing of New Issues, *Journal of Finance*, 44, 383-420.
- Guo, R. J., Lev, B. and Shi, C., 2006, Explaining the Short and Long Term IPO Anomalies in the USA by R&D, *Journal of Business Finance & Accounting*, 33, 550-579.
- Hamao, Y., Packer, F. and Ritter, J. R., 2000, Institutional Affiliation and the Role of Venture Capital: Evidence from Initial Public Offerings in Japan, *Pacific-Basin Financial Journal*, 8, 529-558.
- Hellmann, T., Lindsey, L. and Puri, M., 2003, Building Relationships Early: Banks in Venture Capital, Working paper, Stanford University
- Hellmann, T. and Puri, M., 2000a, The Interaction between Product Market and Financing Strategy: The Role of Venture Capital, *Review of Financial Studies*, 13, 959-984.
- Hellmann, T. and Puri, M., 2000b, Venture Capital and the Professionalisation of Start-up Firms: Empirical Evidence, *Journal of Finance*, 57, 169-197.
- Holland, K. and Horton, J., 1993, Initial Public Offerings on the Unlisted Securities Market: the Impact of Professional Advisers, *Accounting and Business Research*, 24, 19-34.
- Ibbotson, R. G., Sindelar, J. and Ritter, J. R., 1994, The Market's Problems with the Pricing of Initial Public Offerings, *Journal of Applied Corporate Finance*, 7, 66-74.

- Jain, B. A. and Kini, O., 2000, Does the Presence of Venture Capitalists Improve the Survival Profile of IPO Firms?, *Journal of Business Finance and Accounting*, 27, 1139-1183.
- Kim, J. B., Krinsky, I. and Lee, J., 1995, The Aftermarket Performance of Initial Public Offerings in Korea, *Pacific-Basin Financial Journal*, 3, 429-448.
- Kim, J. I. and Park, I. U., 2002. Stock Market Condition and Pricing of Initial Public Offerings: A Theory and Evidence from the KOSDAQ Stock Market, *Korean Economic Review*, 18, 349-371.
- Kim, B-J, Kish, R.J. and Vasconcellos, G.M. 2002 'The Korean IPO Market: Initial Returns *Review of Pacific Basin Financial Markets and Policies* Vol. 5, No.2 219-253
- Korean Venture Capital Association, 2001, *2000 Korean Venture Capital Yearbook*.
- Korean Venture Capital Association, 2002, *2001 Korean Venture Capital Yearbook*.
- Korean Venture Capital Association, 2003, *2002 Korean Venture Capital Yearbook*.
- KOSDAQ, <http://www.kosdaq.or.kr>.
- KOSDAQ, 2003, Comparison of Major Yearly Statistics between KOSDAQ and KSE, www.kosdaq.or.kr.
- Korean Stock Exchange, www.kse.or.kr.
- Kortum, S. and Lerner, J., 1998, Does Venture Capital Spur Innovation?, NBER Working Papers, National Bureau of Economic Research 6846.
- Lee, P. M. and Wahal, S., 2004, Grandstanding, Certification and the Underpricing of Venture Backed IPOs, *Journal of Financial Economics*, 73, 375-407
- Lerner, J., 1994, The syndication of venture capital investments, *Financial Management*, 23, 16-27.
- Li, X. and Masulis, R. W., 2003, Venture Capital Investments by IPO Underwriters: Certification or Conflict of Interest?, Working paper, University of Miami and Vanderbilt University.
- Logue, D., Rogalski, R. J., Seward, J. K. and Foster-Johnson, L., 2002, What is Special about the Roles of Underwriter Reputation and Market Activities in Initial Public Offerings?, *Journal of Business*, 75, 213-243
- London Stock Exchange, 2002, Market Statistics, www.londonstockexchange.com.
- Loughran, T. and Ritter, J. R., 2002, Why Don't Issuers Get Upset about Leaving Money On the Table in IPOs?, *Review of Financial Studies*, 15, 413-443.
- Lowry, M. and Schwert, G. W., 2002, IPO Market Cycles: Bubbles or Sequential Learning?, *Journal of Finance*, 57, 1171-1200.
- Megginson, W. L. and Weiss, K. A., 1991, Venture Capitalist Certification in Initial Public Offerings, *Journal of Finance*, 46, 879-903.
- Ministry of Commerce, Industry and Energy, <http://www.mocie.go.kr>.
- National Venture Capital Association, 2001, *2000 National Venture Capital Association Yearbook*.
- National Venture Capital Association, 2002, *2001 National Venture Capital Association Yearbook*.
- National Venture Capital Association, 2003, *2002 National Venture Capital Association Yearbook*.
- NASDAQ Newsroom, 2003, Market Performance, www.nasdaqnews.com.
- OECD, 2003, Venture Capital Policy Review: United States, Working Paper, Science, Technology and Industry Department.

- Prowse, S., 1990, Institutional Investment Patterns and Corporate Financial Behaviour in the United States and Japan, *Journal of Financial Economics*, 27, 43-66.
- Rajan, R., and Servaes, H., 1997, Analyst Following of Initial Public Offerings, *Journal of Finance*, 52, 507-529.
- Rindermann, G., 2002, Venture Capitalist Participation and Post-Issue Performance of IPO Firms: Empirical Evidence from France, Germany and U.K., Working Paper, University of Munster.
- Ritter, J. R., 1998, Initial Public Offerings. In D. Logue and J. Seward (eds) *Contemporary Finance Digest* Vol. 2 No. 1, 5-30.
- Rock, K., 1986, Why New Issues Are Underpriced, *Journal of Financial Economics*, 15, 187-212.
- Sahlman, W. A., 1990, The Structure and Governance of Venture-Capital Organizations, *Journal of Financial Economics*, 27, 473-521.
- Schultz, P. and Zaman, M., 2001, Do the individuals closest to internet firms believe they are overvalued?, *Journal of Financial Economics*, 59, 347-381.
- Stuart, T. E., Hoang, H. and Hybels, R. C., 1999, Inter-organisational Endorsements and the Performance of Entrepreneurial Ventures, *Administrative Science Quarterly*, 44, 315-349.
- Titman, S. and Trueman. B., 1986, Information Quality and the Valuation of New Issues, *Journal of Accounting and Economics*, 8, 159-172.
- Welch, I., 1989, Seasoned Offerings, Imitation Costs, and the Underpricing of Initial Public Offerings, *Journal of Finance*, 44, 421-449.

Table I Descriptive Firm and Offering Statistics of All, VC-backed and non-VC-backed IPOs on KOSDAQ 1999~2001

BM and MW indicate billion Won and million Won (Korean currency), respectively. Asterisks denote significance at the level of 1% (***), 5% (**), and 10% (*).

	All	VC-backed IPOs	Non VC- Backed IPOs	T-statistics by t- test	Z-scores by Mann-Whitney test
	Mean <i>Median</i>	Mean <i>Median</i>	Mean <i>Median</i>		
<i>A. Firm Characteristics</i>					
Age (Year)	12.1 <i>9.7</i>	9.6 <i>8.1</i>	14.2 <i>11.9</i>	-5.7***	-5.6***
Total asset (BW)	50.0 <i>14.9</i>	17.5 <i>12.8</i>	78.4 <i>18.1</i>	-2.5**	-4.5***
Total debt (BW)	33.6 <i>7.5</i>	9.4 <i>6.1</i>	54.7 <i>8.5</i>	-2.1**	-3.8***
Turnover (BW)	46.1 <i>16.7</i>	22.1 <i>13.9</i>	67.0 <i>20.3</i>	-3.3***	-4.2***
EBIT (BW)	2.8 <i>1.9</i>	2.4 <i>1.8</i>	3.1 <i>2.1</i>	-0.8	-2.8***
EBIT / Total asset (%)	14.6 <i>13.1</i>	15.4 <i>13.9</i>	13.8 <i>11.8</i>	1.3	-2.1**
Total debt / Total asset (%)	49.3 <i>50.1</i>	49.6 <i>50.1</i>	49.1 <i>49.8</i>	0.3	-0.3
R&D (MW)	752.2 <i>240.6</i>	843.1 <i>364.6</i>	672.9 <i>118.8</i>	0.8	-4.0***
R&D intensity(R&D/Total Asset) (%)	5.1 <i>1.0</i>	7.7 <i>2.9</i>	2.8 <i>0.3</i>	4.1***	-5.1***
Age of CEO	50.5 <i>49.4</i>	47.7 <i>46.4</i>	53.0 <i>53.2</i>	-5.6***	-5.3***
Number of board of directors	6.6 <i>6.0</i>	6.3 <i>6.0</i>	6.9 <i>6.0</i>	-2.2**	-0.8
Number of employees	180.7 <i>93.0</i>	105.0 <i>77.0</i>	246.4 <i>115.0</i>	-3.9***	-5.0***
Initial return (%)	174.0 <i>105.2</i>	202.3 <i>119.4</i>	149.3 <i>100.0</i>	2.1**	-1.8*
<i>B. Offering Statistics</i>					
Market value of equity (BW)	78.1 <i>27.4</i>	54.8 <i>33.5</i>	98.4 <i>22.5</i>	-1.2	-3.6***
Gross proceeds (BW)	14.2 <i>6.7</i>	11.6 <i>7.6</i>	16.5 <i>5.4</i>	-1.4	-2.9***
Book-to-market ratio	0.4 <i>0.3</i>	0.3 <i>0.2</i>	0.6 <i>0.4</i>	-6.4***	-7.2***
Underwriting Fees (MW)	371.7 <i>237.3</i>	368.8 <i>261.7</i>	374.3 <i>210.0</i>	-0.1	-1.8*
Underwriting Fees / Gross Proceeds(%)	3.9 <i>3.8</i>	3.6 <i>3.5</i>	4.1 <i>4.0</i>	-2.2**	-2.3**
Price revision (%)	13.4 <i>12.5</i>	23.2 <i>20.0</i>	4.8 <i>0.0</i>	5.0***	-5.3***
Share overhang	3.4 <i>3.8</i>	3.6 <i>3.9</i>	3.3 <i>3.6</i>	2.4**	-2.3**
Number of observations	(372)	(173)	(199)		

Source: IPO prospectuses and financial data provided by Korean Information System

Table II Ownership Structure of Pre-IPO

Asterisks denote significance at the level of 1% (***), 5% (**), and 10% (*).

	<i>VC-Backed IPOs'</i> <i>Mean</i>	<i>Non VC- Backed IPOs'</i> <i>Mean</i>	T-statistics by t-test	Z-scores by Mann- Whitney test
CEO stake (%)	32.2 32.8	31.9 31.7	0.18	-0.65
CEO's family stake (%)	6.1 1.4	13.0 5.7	-4.60 ***	-3.13 ***
Board of directors stake (%)	7.8 4.2	9.7 2.3	-1.35	-0.86
Insider stake (%) (CEO+ family + BoD)	46.2 48.0	54.4 57.1	-3.05 ***	-3.41 ***
Corporate stake (%)	5.2 0.0	14.0 0.0	-4.00 ***	-3.74 ***
Venture capitalists stake (%)	15.1 13.5	0.0 0.0	26.06 ***	-18.00 ***
Banks stake (%)	1.3 0.0	0.7 0.0	1.25	-2.11 **
Security company stake (%)	1.6 0.0	2.2 0.0	-0.88	-0.16

Source: IPO prospectuses

Table III Underpricing by Different Types of IPOs on KOSDAQ 1999~2001

KOSDAQ IPO samples are divided into two groups respectively as: (1) VC-backed Firms (when any venture capitalist owns 5% or more of total shares of an IPO firm) and Non-VC-backed Firms; (2) Hot Market issue (when an IPO was listed in KOSDAQ in the period up to March 2000) and Cold Market issue (after March 2000); (3) Young firms (when the age of firm is equal to or less than the median value, 9.6 years) and Old firms; (4) Small firms (when the market capitalisation calculated as the offer price multiplied by the number of shares is equal to or less than the median value, 2.4 billion Won) and Big firms; (5) High-tech firms (which include Other Machinery and Equipment (KIC 29), Computers and Office Machinery (30) Electrical Machinery and Apparatuses (31) Electronic Components, Radio, Television (32) Medical, Precision and Optical Instruments (33), and Computer and Related Activities (72) as was defined in Chapter 4) and Non-high-tech firms. These different types of groupings apply to the remaining parts of the chapter. Asterisks denote significance levels at the level 1% (***), 5% (**), and 10% (*).

	Mean	Median	Mean	Median	T-statistics by t-test	Z-scores by Mann-Whitney test
(A) Venture-capital-backing						
	VC-backed		Non-VC-backed			
Underpricing (No. IPOs)	2.02 (173)	1.19	1.49 (199)	1.00	2.15 **	-1.79 *
(B) Hot Market Issue						
	Hot Market		Cold Market			
Underpricing (No. IPOs)	2.80 (127)	2.14	1.19 (245)	0.89	6.54 ***	-6.20 ***
(C) Age						
	Young		Old			
Underpricing (No. IPOs)	2.05 (186)	1.23	1.43 (186)	1.00	2.50 **	-2.45 **
(D) Market Capitalisation						
	Small		Big			
Underpricing (No. IPOs)	1.98 (186)	1.36	1.50 (186)	0.82	1.96 *	-4.15 ***
(E) Industry						
	High-tech		Non-high-tech			
Underpricing (No. IPOs)	1.77 (232)	1.07	1.70 (140)	1.00	0.28	-0.01

Source: Korean Information System, IPO prospectuses

Table IV IPO Underpricing by VC-backing and Non-VC-backing Classified by State of the Market, Age, Market Capitalisation and Industry on KOSDAQ 1999~2001

Note 1) T-statistics by t-test between VC-backing and non-VC-backing for each different type of IPOs

Note 2) Z-scores by Mann-Whitney test between VC-backing and non-VC-backing for each different type of IPOs

Asterisks denote significance levels at the level of 1% (***), 5% (**), and 10% (*).

	Mean	Median	Mean	Median	T-statistics by t-test	Z-scores by Mann-Whitney test
Panel A: Hot Market Issue						
	Hot market		Cold market			
VC-backing	3.61	2.38	1.11	0.76	6.51 ***	-6.73 ***
(No. IPOs)	(63)		(110)			
Non-VC-backing	2.00	1.34	1.25	1.00	2.48 **	-2.07 **
(No. IPOs)	(64)		(135)			
T-statistics ¹⁾	2.84 ***		-0.74			
Z-scores ²⁾	-3.50 ***		-0.84			
Panel B: Age						
	Young		Old			
VC-backing	2.37	1.22	1.41	1.07	2.25 **	-1.30
(No. IPOs)	(111)		(62)			
Non-VC-backing	1.58	1.24	1.44	0.93	0.44	-1.68 *
(No. IPOs)	(75)		(124)			
T-statistics	2.01 **		-0.10			
Z-scores	-0.79		-1.07			
Panel C: Market Capitalisation						
	Small		Big			
VC-backing	2.42	1.84	1.77	0.93	1.55	-3.59 ***
(No. IPOs)	(67)		(106)			
Non-VC-backing	1.73	1.20	1.14	0.61	2.03 **	-2.97 ***
(No. IPOs)	(119)		(80)			
T-statistics	2.07 **		1.70 *			
Z-scores	-2.51 **		-1.54			
Panel D: Industry						
	High-tech		Non-high-tech			
VC-backing	1.93	1.19	2.34	1.17	-0.84	-1.22
(No. IPOs)	(133)		(40)			
Non-VC-backing	1.55	1.02	1.44	0.98	0.38	-0.39
(No. IPOs)	(99)		(100)			
T-statistics	1.17		2.15 **			
Z-scores	-0.78		-2.15 **			

Source: Korean Information System, IPO prospectuses

Table V Underpricing by Institutional Type of VC-backing on KOSDAQ 1999~2001

Note 1) Significance of mean difference between groups by Kruskal-Wallis test

Note 2) Significance of mean difference between hot and cold markets for each group by Mann-Whitney test

	Bank-affiliated VC		Security Company-affiliated VC		Other Institution-affiliated VC		Non-VC-backed		Significance ¹⁾
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	
(A) Total									
	(a)		(b)		(c)		(d)		
Underpricing	2.33	1.26	1.29	1.19	2.06	1.15	1.49	1.00	c>d at 10%
(No. IPOs)	(32)		(19)		(122)		(199)		
(B) Hot Market									
	(e)		(f)		(g)		(h)		
Underpricing	4.68	4.43	1.48	2.00	3.54	2.38	2.00	1.34	e>f at 5% e>g at 10% e>h at 1% g>h at 1%
(No. IPOs)	(13)		(5)		(45)		(64)		
(C) Cold Market									
	(i)		(j)		(k)		(l)		
Underpricing	0.72	0.58	1.22	0.86	1.19	0.89	1.25	1.00	
(No. IPOs)	(19)		(14)		(77)		(135)		
Significance ²⁾	e>i at 1%				g>k at 1%		h>l at 5%		

Source: Korean Information System, IPO prospectuses

Table VI OLS Regression on Underpricing for KOSDAQ IPOs in the Whole Market

Regression for underpricing in the whole market. Variables are defined as are specified in the table. All coefficients' t-statistics in the parentheses are heteroskedasticity consistent. Asterisks beside t-statistics *, **, *** denote significance at 10%, 5%, 1% level, respectively.

	Model 1	Model 2	Model 3
Age (ln)	-0.36 (-1.93) *	-0.36 (-1.86) *	-0.41 (-2.16) **
Gross proceeds (ln)	-0.42 (-4.38) ***	-0.43 (-4.24) ***	-0.43 (-4.36) ***
CEO stake	-0.98 (-1.76) *	-0.97 (-1.87) *	-0.82 (-1.43)
EBIT / Total asset	-0.48 (-0.47)	-0.45 (-0.48)	-0.23 (-0.21)
Total debt / Total asset	1.34 (1.59)	1.34 (1.57)	1.36 (1.55)
1 if in high-tech industry	-0.08 (-0.30)	-0.08 (-0.32)	-0.10 (-0.38)
R&D intensity(R&D expenditure/Total asset)	1.40 (0.87)	1.41 (0.90)	1.52 (0.96)
IPO Number of last month prior to IPO	-0.01 (-1.44)	-0.01 (-1.44)	-0.01 (-1.43)
Contemporary underpricing	0.12 (1.41)	0.12 (1.43)	0.11 (1.30)
Cumulative market index return (20 day)	3.44 (3.55) ***	3.42 (3.56) ***	3.45 (3.63) ***
Share overhang	0.15 (1.43)	0.15 (1.42)	0.15 (1.42)
Price revision	1.34 (3.33) ***	1.34 (3.24) ***	1.33 (3.08) ***
1 if VC-backed	0.00 (0.02)		
1 if top 3 tier VCs-backed		0.07 (0.18)	
1 if bank-affiliated VC-backed			0.15 (0.29)
1 if security company-affiliated VC-backed			-0.61 (-2.01) **
1 if a bank has shareholding			-0.02 (-0.06)
1 if a security company has shareholding			0.42 (0.88)
1 if top 3 tier underwriters involved	-0.20 (-0.57)	-0.19 (-0.57)	-0.17 (-0.48)
Constant	11.64 (4.27) ***	11.66 (4.10) ***	11.81 (4.36) ***
Probability > F	0.00	0.00	0.00
Adjusted R-square	0.22	0.22	0.23
No. of IPOs	372	372	372

Table VII OLS Regression on Underpricing for KOSDAQ IPOs in the Hot and Cold Markets

Regression for underpricing in the hot market and the cold market that are divided by whether the IPO were listed before/after April 2000. Variables are defined as are specified in the table. All coefficients' t-statistics in the parentheses are heteroskedasticity consistent. Asterisks beside t-statistics *, **, *** denote significance at 10%, 5%, 1% level, respectively.

	Hot Market			Cold Market		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Age (ln)	-1.24 (-2.75)***	-1.24 (-2.72)***	-1.23 (-2.72)***	0.03 (0.23)	0.03 (0.23)	0.03 (0.22)
Gross proceeds (ln)	-0.18 (-0.96)	-0.18 (-0.95)	-0.14 (-0.79)	-0.61 (-5.95)***	-0.60 (-5.96)***	-0.63 (-5.99)***
CEO stake	-1.88 (-1.36)	-1.77 (-1.61)	-1.58 (-1.24)	-0.23 (-0.64)	-0.28 (-0.78)	-0.24 (-0.64)
EBIT / Total asset	1.10 (0.48)	1.18 (0.56)	0.99 (0.41)	0.47 (0.99)	0.28 (0.54)	0.49 (0.98)
Total debt / Total asset	2.14 (1.22)	2.13 (1.22)	2.16 (1.09)	-0.27 (-0.88)	-0.23 (-0.77)	-0.17 (-0.54)
1 if in high-tech industry	0.50 (0.93)	0.47 (0.84)	0.45 (0.84)	-0.27 (-1.35)	-0.28 (-1.46)	-0.27 (-1.40)
R&D intensity(R&D expenditure/Total asset)	2.75 (0.93)	2.76 (1.01)	2.87 (1.02)	0.61 (0.85)	0.50 (0.69)	0.57 (0.77)
IPO Number of last month prior to IPO	-0.02 (-1.52)	-0.02 (-1.48)	-0.02 (-1.47)	-0.04 (-3.87)***	-0.04 (-3.88)***	-0.04 (-3.88)***
Contemporary underpricing	-0.21 (-1.62)	-0.20 (-1.64)	-0.20 (-1.70)*	0.25 (3.74)***	0.25 (3.87)***	0.25 (3.93)***
Cumulative market index return (20 day)	4.85 (2.21)**	4.91 (2.22)**	4.74 (2.16)**	1.18 (2.92)***	1.29 (3.17)***	1.11 (2.71)***
Share overhang	0.20 (1.12)	0.19 (1.05)	0.19 (1.02)	-0.01 (-0.13)	0.00 (-0.01)	0.00 (0.01)
Price revision	2.53 (1.94)*	2.54 (1.92)*	2.35 (1.61)	0.97 (3.12)***	1.00 (3.03)***	0.98 (3.04)***
1 if VC-backed	0.00 (0.00)			-0.08 (-0.51)		
1 if top 3 tier VCs-backed		0.27 (0.34)			-0.39 (-2.00)**	
1 if bank-affiliated VC-backed			0.71 (0.62)			-0.29 (-1.86)*
1 if security company-affiliated VC-backed			-1.77 (-2.34)**			0.10 (0.39)
1 if a bank has shareholding			0.30 (0.28)			-0.38 (-1.91)*
1 if a security company has shareholding			0.44 (0.36)			0.23 (1.35)
1 if top 3 tier underwriters involved	0.22 (0.27)	0.20 (0.26)	0.30 (0.35)	-0.33 (-2.04)**	-0.36 (-2.27)**	-0.32 (-2.05)**
Constant	8.48 (1.56)	8.49 (1.54)	7.35 (1.45)	15.88 (6.46)***	15.74 (6.43)***	16.25 (6.44)***
Probability > F	0.00	0.00	0.00	0.00	0.00	0.00
Adjusted R-square	0.29	0.29	0.31	0.38	0.39	0.39
No. of IPOs	127	127	127	245	245	245

The process of entrepreneurial opportunity interprétation

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Opportunity identification has always been considered as a central aspect of entrepreneurship. However, there is no agreement on how to operationalize this process. In this paper, we suggest that individuals interpret objective opportunities identified to develop personal business opportunities. In an effort to document this process of opportunity interpretation, we are conducting an empirical study, which explores mental processes underlying the release of the process and the strategies used to opportunity interpretation. A multi case study methodology is used to understand the interaction of three main variables during this process: expectations, perceived competences and perceived possibilities available from the environment.

Track: 10. New Venture Creation and SME Growth

The Upper Echelon, Resource Mobilization and Firm Growth

By Young Keun Choi and Seungwha Chung

Regarding UEP theory, this paper raises three questions about unit of analysis of UE, influence of CEO, and category of UE's characteristics and develop the new model. For empirical verification, this study examines how demography of CEO and social capitals of TMT affect the strategic choice to acquire VC investment and firm's growth of time-to-IPO. An empirical results showed that school prestige career of CEO and school prestige network in external social capitals of TMT are positively related to the acquisition of the investment, and as combined with the acquisition of the investment, company relation in internal social capitals of TMT decreased time-to-IPO.

Introduction

Hambrick & Mason(1984), in the seminal paper, pioneered the Upper Echelon Perspective(UEP) theory, incorporating the ideas over upper echelon, business strategy and performance. At its core, the UE perspective centers on executive cognitions, value, perceptions and their influence on the process of strategic choice and resultant performance outcomes.

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But with these concepts being abstractive, there was a measurability problem. As an attempt to deal with this, the UE perspective invokes prior research on demography to suggest that managerial characteristics are reasonable proxies for underlying differences in cognitions, values, and perceptions. Upper echelon characteristics such as age, functional background, and educational experiences are next taken as observable proxies for the psychological constructs that shape the team's interpretation of the internal and external situation and facilitate the formulation of appropriate strategic alternatives. The prominent role of psychological constructs like values and perceptions is attributed to executives' bounded rationality.

The researches after H&M(1984) was able to capitalize on the foundation of empirical findings that UE characteristics link up with not only firm strategic profiles(e.g., Bantel & Jackson, 1989; Finkelstein & Hambrick, 1990; Smith et al., 1991) but firm performance(e.g., D'Aveni, 1990).] Moreover, earlier works already showed that the UE model was applicable in diverse contexts including U.S. and international organizations (e.g., Hoffman & Hegarty, 1993; Wiersema & Bird, 1993).

In turn, researches focused to a greater extent not only on adding nuance to our understanding of the process by which managers have a crucial effect on firm outcomes, but elaborating on H&M's original model through the new enhancement. Remarkably, Mason et al(2004) integrated those inroads with the original H&M framework and suggested "second-generation" UE model. Its prominent features included identification of major organizational and environmental antecedents of top management team composition. The model also highlighted an array of theoretical constructs proxied by UE characteristics in recent research and empirically linked to major organizational outcomes. Further, it reflects the most significant intervening variables-namely, five moderators and mediators central to the UE framework. Finally, outcomes are differentiated in terms of strategy, performance, and the upper echelon itself, with feedback loops depicting evidence of potentially recursive relationships.

But, UEP theory only suggested that UE was critically important to the organization and research results lacked consistency

Theoretical Background

This research raises three questions about the preceding studies. First, this paper raises a question about the unit of analysis of UE. H&M were explicit in

arguing the need to focus on the top management team as opposed to other units, most especially the CEO alone. Their collectivist approach was born of observations that strategic choice is an arduous task, far exceeding the capabilities of individual executives (Cyert & March, 1963). Simmons, et al. (1999) got interested in internal social interaction by reporting that the effect of TMT diversity (education, functional background, and tenure) on firm performance was moderated by debate. But their research had a limit in regarding TMT as a group unit.

Second, this research raises a question about the influence of CEO. Clearly the value of studying top executives in aggregate (especially their multiple knowledge bases and viewpoints) is not disputed. However, mounting evidence suggests that in studying executives collectively, important individual-level effects have been overlooked (e.g., Bertrand & Schoar, 2003; Jensen & Zajac, 2004). In fact, a growing volume of empirical studies reported that asymmetry in the TMT is itself a powerful force, executive celebrity, and networks (e.g., Bigley & Wiersema, 2002; Carpenter & Sanders, 2002; Peterson et al., 2003; Pitcher & Smith, 2001; Hayward & Hambrick, 2003; Eisenhardt & Schoonhoven, 1996; McDonald & Westphal, 2003). But, the relevant researches regard these characteristics as moderators to decision-making in TMT.

Third, this research raises a question about the category of UE characteristics. Researches introduced that UE characteristics were collective constructs of executives' characteristics and characteristics of composition. And they suggested that UE characteristics affected both strategic choices and firm's performances without considering the effect and origin of UE characteristics. In turn, Lack of theoretical research about difference between UE characteristics doesn't explain the relation between strategic choices and firms' performance.

1. Unit of analysis

Simmons, et al. (1999) raised necessity that TMT should be analyzed not on a collective concept of executives, but on a group unit. Group unit of analysis should be distinguished from a collective concept of executives. TMT is a group which is composed of executives with social interaction, not separate individuals. So, TMT should be analyzed through characteristics of a group unit created by social interaction.

Social interactions formulate social networks. These social networks can mobilize substantial or potential resources. Total sum of these resources is called 'Social Capital'.

While earlier studies mainly categorized social capital by network characteristics, we put an emphasis on the location of network in TMT. Social

capital can be categorized into internal and external social capital each other. TMT has internal social capital that is capable of facilitating communication in TMT, whereas TMT has external social capital that can make it possible to network with external stakeholders(e.g., customer, investor)

Reagans & Zuckerman(2001) maintained that there were social capitals on the unit of analysis and suggested the empirical inconsistency with respect to the demographical heterogeneity of TMT on group performance due to the existence of two different social capitals – internal and external. According to the empirical findings by Reagans et al.(2004), demographical heterogeneity affected network that measured social capital but didn't affect group's performance. In turn, it is not certain that demographical heterogeneity affects firm's performance. So, it is not right approach that only heterogeneity of TMT affects firm s' strategic choice and performance. Heterogeneity was the transitional construct that has limit, although TMT was regarded as group unit, not collective executives.

This research finds out that the unit of analysis of TMT has limit and suggest that unit of analysis of TMT should be group unit. Also, considering this unit of analysis, we suggest that the characteristics of TMT should be not heterogeneity of demography but internal and external social capital.

Insert Table 1 about here

2. Influence of CEO

A growing volume of empirical studies reported that asymmetry in the TMT are itself a powerful force(e.g., Bigley & Wiersema, 2002; Carpenter & Sanders, 2002). It introduced a number of mechanisms and processes not anticipated by the original UE model, yet nonetheless relevant for major organizational outcomes. For example, studies report that power(Pitcher & Smith, 2001), executive celebrity(Hayward & Hambrick, 1997), and networks(Eisenhardt & Schoonhoven, 1996; McDonald & Westphal, 2003) are three means by which executive leaders directly impact the range of strategic alternatives available to the firm, as well as the choices ultimately effected. Yet when compared to the factors outlined in the original UE model(e.g., age, functional background), these variables are not uniformly distributed among managers. Most often, they tend to accrue to CEOs, suggesting that the team (or group) is not a universally apt unit of analysis.

This observation is in many ways consistent with earlier calls to tailor the

unit of analysis to specific research questions (Jackson, 1992; Pettigrew, 1992). With yet another decade of research in hand, there is little doubt that differences exist within executive ranks and that those differences matter for UE-related outcomes. Thus, while use of team-based approach is appropriate to the research of relationship between team decision making process and organizational outcomes, team aggregation is not universally advisable. In fact, it may inhibit consideration of variables and processes nevertheless germane to organizational outcomes, yet which arise at different units of analysis (e.g., CEO or TMT). So, according to the agenda, some agenda need decision-making of CEO by himself and other agenda need decision-making of TMT rather than CEO by himself.

This research suggests that UE should be categorized into CEO and TMT., and it is needed to empirically analyze which one(CEO or TMT) is more affective to the specific agenda more.

Insert Table 2 about here

3. Categorization of UE characteristics

H&M(1984) and Mason et al(2004) presented that demographical variables of executives affected both strategic choices and firm's performance. Considering the effect of characteristics, the characteristics of UE can be categorized into strategy-related characteristics and performance-related characteristics. Namely, strategy-related characteristics mean variables that affect strategic choices and performance-related characteristics mean variables that affect firm's performance. And considering the origin of characteristics, UE characteristics can be categorized into propensity and capability. Namely, propensity mean values and behavior pattern and capability mean the level of possession of resources. So strategy-related characteristics can be categorized into strategic propensity and strategic capability. Strategic propensity and strategic capability have a same role that affects strategic choices. But strategic propensity is values and behavior pattern of CEO or values and behavior pattern from internal social capital of TMT whereas strategic capability the level of possession of resources of CEO or from external social capital of TMT. And also performance-related characteristics mean management capability of UE that affects firm's performance. Strategic capability is required for strategic choices but doesn't affect firm's performance directly. But management capability is the variable affecting

firm's performance directly.

As is mentioned above, the characteristics of UE in the preceding studies can be categorized by the following table.

Insert Table 3 about here

H&M model and 'second-generation' model showed that the characteristics of UE affected strategic choices and strategic choices affected firm's performance. But no studies of UE analyzed that strategic choices affected firm's performance theoretically and empirically.

In the field of strategic management study, explaining the relationship between strategy and performance, no significant result can be obtained without considering other factors empirically. So, although studies on UE showed that the characteristics of UE affected strategic choices and firm's performance, they couldn't explain that strategic choices affected firm's performance.

This research claims that it is not appropriate approach that only strategic choice itself affects firm's performance but the characteristics of UE affect the relationship between strategic choices and firm's performance. It is not strategy-related characteristics but performance-related characteristics that affects the relationship between strategic choices and firm's performance. The performance-related characteristics of UE can positively affect on firm's performance, when they can just fit strategic choices effectively. The performance-related characteristics of UE negatively or insignificantly affect, when they cannot fit strategic choices.

So to make UEP model in-depth theoretically, it is not that strategy-related characteristics affect strategic choices and performance-related characteristics affect firm's performance, but this research suggests that performance-related characteristics are mediator or moderator between strategic choices and firm's performance. And to make UEP model in-depth empirically, the characteristics of UE should be properly selected to research model.

Hypothesis

All kinds of organizations are not self-sufficient and inseparable to situation. To accomplish the goal, organizations need to acquire resources from external situation. Especially compared with competitor, young companies are lacking resources(e.g.,

human resource, capital, name-recognition, etc). The Lack of these kinds of resources is due to small scale in the perspective of years of age. Studies claimed that acquiring resources is essential not only for firm's growth but also for firm's survival(Vesper, 1980; Duchesneau & Gartner, 1990). Then, can young companies make rapid growth, only if they acquire resources from external situation?

Most insufficient resource is financial resources. John & William(1990) explained that venture capital played an important role in financing. Gompers & Lerner(1997, 2001) claimed that time-to-IPO of venture capital-backed young companies is inclined to be shorter than other young companies. They explained that it is because venture capital provided other resources as well as capital investment. In the half of young companies, financing from venture capital can be strategic choice to make fast growth. It has limit in the sense that firm's performance can be only explained by its strategy with no consideration of any other variables. Therefore, the notion that acquiring venture capital investment can make fast growth is not reasonable. Rather it makes sense that there is mediator between strategic acquisition of resources and firm's performance.

Strategic choice to acquire venture capital investment is practicable not through strategic propensity, but through strategic capability. In the strategic capabilities of UE, ability to connect venture capital positively affects venture capital investment, because this ability is closely related to gathering information and contacting venture capital.

Making strategic choice to acquire venture capital investment positively affecting firm's performance requires managerial capability of UE as the role of mediator or moderator. Effective management of venture capital following acquisition is crucial for firm's growth. In general capital for R&D, facility investment, and marketing is needed for young companies' growth. Otherwise, although young companies manage to acquire venture capital investment, they cannot accomplish their growth goal. The ability to use and manage venture capitals has influence on firm's growth. So, fast growth is possible not through only strategic choice of acquiring venture capital investment but with the ability to make growth.

To examine the relationship between acquiring external resource and firm's growth, this research will examine the relationship between the UE's ability to acquire external resources and firm's growth. And also, it will examine if CEO's ability is more important for the research model, or TMT's ability is more important for the research model. Figure 1 illustrates our theoretical model and indicates the hypothesized relationship.

Insert Figure 1 about here

1. CEO' influence on resource acquisition and firm's growth

What are the demographical variables or provide constructs of CEO regarding the ability to acquire external resource and the ability to make growth ?

First, this research regards financial company career, government agency career, and school prestige as the ability to acquire venture capital investment.

Financial company career is positively related to the acquisition of venture capital investment. Venture capitals, commercial banks, and investment banks understand each other's business processes and make mutual human network for cooperation. These kinds of networks affect acquiring venture capital investment positively.

Government agency career is positively related to the acquisition of venture capital investment. Government-related capitals participated in 44% of total amount of the funds of venture capitals in Korea(Korea Venture Capital Association, 2008). So government strongly affects venture capitals in Korea. Government agency career can have direct or indirect network to affect venture capitals in Korea. So the network to affect venture capitals in Korea can positively affect accessing not only venture capitals but also acquiring the investment.

School prestige career is positively related to the acquisition of venture capital investment. Alumna career is helpful for not only friendship but also high-level networking (Zwigenhart & Domhoff, 1991; Belliveau et al., 1996; Useem & Karabel, 1996). Especially, network of school prestige facilitates accessing the situation and gathering information of high quality. In turn, it positively affects the ability to acquire external resources.

Second, this research regards functional background and formal education level as the ability to make growth.

Functional background is significantly related to the ability to make growth. Hambrick & Mason(1984) claimed that output function experiences of executives were positively related to firm's growth, throughput function experiences had no significance. Firm's growth is strongly related to marketing, sales, and R&D. So output function experience positively affects the ability to make growth, for it can use and manage the capital for marketing, sales, and R&D.

Education is significantly related to the ability to make growth. Schroder, et al.(1967) explained that education level was related to recognition ability and function and the higher education level, the higher information processing ability. And also, irrelevant to majors, the higher education level executives have, the higher innovation they make(Becker, 1970; Kimberly & Evanisko, 1981; Rogers & Shoemaker, 1971, Hambrick & Mason, 1984).

After acquiring venture capital investment, high level of education of CEO will positively affect the ability to use and manage the capital for the fast growth. It is

because firm's growth is strongly related to marketing, sales, and R&D and the ability of information processing and innovation can make big effectiveness on them.

H1. The higher level of ability to acquire external resources CEOs have, The better firms acquire them.

H1-1. The financial company career of CEOs will be helpful for firms' acquisition of venture capital investment.

H1-2. The government agency career of CEOs will be helpful for firms' acquisition of venture capital investment.

H1-3 The school prestige career of CEOs will be helpful for firms' acquisition of venture capital investment.

H2. The CEOs' ability of making growth will be mediator or modulator between acquiring external resources and fast growth.

H2-1. The CEOs' output function experience will be mediator or modulator between the acquisition of external resources and fast growth.

H2-2. The CEOs' school prestige will be mediator or modulator between the acquisition of external resources and fast growth.

2. TMT' s influence on resource acquisition and firm's growth

What are social capitals of CEOs regarding the ability to acquire external resources and the ability to make growth?

First, in this paper external social capital is regarded as the ability to acquire venture capital investment. External social capital is the basic concept of external network ranges that executives of TMT have. The broader external network range they have, the bigger ability to gather ideas, information and resources they have(Burt, 1992; Podolny & Baron, 1997; Baum & Oliver, 1992; Pennings et al., 1998; Heller & Firestone, 1995; Useem et al., 1997; Leana & Barry, 2000; Pfeffer & Salancik, 1978; Rosenthal, 1996; Hansen, 1999; Tsai & Ghoshal, 1998; Geletkanycz & Hambrick, 1997; Kogut, 2000; Reagans et al., 2004; Collins & Clark,2003; Acquaah, 2007).

The TMT's ability to acquire external resources affects the acquisition of venture capital investment like the ability of CEO. Thus, the bigger external social capital TMT have, the better they can acquire venture capital. This is so-called the external social network. We introduce it into our model. This paper suggests that external social capitals would positively affect the acquisition of venture capital investment. It is because executives of TMT can gather information and ideas through external network and they can increase the ability to acquire venture capital.

Considering the case of Korea, we suggest three kinds of external social network. ,which are the financial company career of executives, government agency career, and school prestige career in TMT.

Second, this research regards internal social capital as the ability to make firm's growth. Internal social capital is the basic concept of internal network density among executives of TMT. The higher internal network density they have, The bigger ability to do internal execution they have. It is because high internal network density facilitates mutual interaction and increases knowledge-absorptive ability, which in turn enhances internal execution by sharing knowledge(Coleman, 1988, 1990; Granovetter, 1985; Reagans & Zuckerman, 2001; Reagans et al., 2004; Ports & Sensenbrenner, 1993; Uzzi, 1997; Woolcock, 1998; Marsden, 1990; Oh et al., 2004; Alder & Kwon, 2002; Nahapiet & Ghoshal, 1998; Onyx & Bullen, 2000; Mohammed & Dumville, 2001).

Internal execution on the shared knowledge is positively related to the process to manage the capital from venture capital. So the bigger internal social capital TMT have, the better they can make firm's growth. This is the internal social network. This network is also involved in our model. We suggest that after acquiring venture capital investment, that internal social capitals positively affect making firm's growth. It is because that they can use and manage the capital through higher execution on shared knowledge.

This kind of internal execution requires cooperation among the executives of TMT. Considering the case of Korea, this paper suggests three kinds of internal social network. First, family relationship can be a social network to explain cooperation on trust. Second, alumni relationship can make cooperation on school friendship. Third, common company careers can make cooperation on camaraderie.

H3. The higher level of ability to acquire external resources TMTs have, the better firms acquire them.

H3-1. The financial company career in the external social capitals of TMTs will be helpful for firm to acquire venture capital investment.

H3-2. The government agency career in the external social capitals of TMTs will be helpful for firms to acquire venture capital investment

H3-3. The school prestige career in the external social capitals of TMTs will be helpful for firms to acquire venture capital investment

H4. TMTs' ability of making growth will be mediator or modulator between the acquisition of external resources and fast growth.

H4-1. The family relationship in internal social capitals of TMTs will be mediator or modulator between the acquisition of external resources and fast growth.

H4-2. The alumni relationship in internal social capitals of TMTs will be mediator or modulator between the acquisition of external resources and fast growth.

H4-3. The common company relationship in internal social capitals of TMTs will be mediator or modulator between the acquisition of external

resources and fast growth.

Methodolgy

1. Sample

The original sample of 694KOSDAQ (Korea Securities Dealers Automated Quotation) covers the period from Jan 1st, 2000 to December 31st, 2005. We collected disclosures from DART (Data Analysis, Retrieval and Transfer System), which is an electronic disclosure system that allows companies to submit disclosures through online (dart.fss.or.kr). We also supplemented the data with diverse sources such as new articles, publications, corporate homepages and phone calls to the firms. Therefore, the final sample used for experiments consists of 447 KOSDAQ firms.

2. Variables

The characteristics and measurements of variables included in our model are summarized in Table 4.

Insert Table 4 about here

Empirical Results

1. The effect of the characteristics of UE(CEO, TMT) on acquiring external resources(Hypothesis 1 and 3) – Logistic regression analysis results

Hypotheses described above are tested with logistic regression and survival analysis. First, Hypothesis 1 and 3 are analyzed by logistic regression if UE's ability to acquire external resources influences the strategic choice of acquiring venture capital investment. Second, Hypothesis 2 and 4 are analyzed by survival analysis if the strategic choice of acquiring venture capital investment affects firm's growth through UE's ability to make firm's growth. In this case, time-dependent cox-

regression is used, for the hazard function of covariates is changed on time.

Insert Table 5 about here

Model 1 is the basic model including control variables. Only foundation year in the control variables has significant relation statistically. It shows that the latter start-ups established, the more VC investment they got.

Model 2,3,4 defined financial company career, government agency career, school prestige career as the characteristics of CEO. Only school prestige career in them has significant relation statistically. It shows that CEO who has school prestige has bigger ability of acquiring VC investment than any other CEO. In our hypothesis testing, H 1-3 is supported whereas H 1-1 and H1-2 are rejected.

Model 5,6,7 defined financial company experience index, government agency experience index, school prestige experience index as the characteristics of TMT, external social capital. Only school prestige experience index in them has significant relation statistically. It shows that the TME that has school prestige network of executives has bigger ability of acquiring VC investment than any other TMT. In our hypothesis testing, H 3-3 is supported whereas H 3-1 and H 3-2 are rejected.

2. The interaction effect of the characteristics of UE(CEO, TMT) the relationship and the acquisition of external resource on firm's growth (Hypothesis 2 and 4) – Survival analysis results

Insert Table 6 about here

Model 1 is the basic model including control variables. Only foundation year, IPO year in the control variables has significant relation statistically.

Model 2 shows that venture capital investment does not affect time-to-IPO

significantly. So interaction effect is not modulator, but mediator.

Model 3,4. shows that all of interaction don't affect time-to-IPO. Therefore, In our hypothesis testing, all of H 6 are rejected.

In the model 5,6,7, results shows that only interaction of VC and company relation index in the interactions has significant relation. It can that the denser the relation of common company TMTs have, bigger growth they can make taking advantage of VC investment. Therefore, in our hypothesis testing, H 4-3 is supported whereas H 4-1 and H 4-2 are rejected.

Discussion and Conclusion

So far, we have discussed UE's characteristics, strategic choice, and their effect on the relationship between strategic choice and the firm's growth.

To summarize the results of this study. First, the higher level of ability to acquire external resources CEOs and TMT have, the better firms acquire them. The ability includes school prestige careers. Alumni premium network facilitates TMT to acquire venture capital investment. Second, in mediating variables between the acquisition of external resources and firm's growth. Only company relation index affects significantly.

Implications of this study are as follows. First, the results provide a practical implication related to the election of CEO and composition of TMT in the purpose of acquiring external resources. Especially, young companies need to elect CEOs and executives in TMT with school prestige careers. the result shows that the more school prestige career index of TMT the companies have, they can acquire venture capital investment better than other companies. So this study suggests that the school prestige of executives should to be required at maximum for acquiring venture capital investment.

Second, the results provide a practical implication regarding the characteristics of UE in the purpose of venture capitalists' investment decision-making. Venture capitalists want a CEO and TMT to use and manage the capital and in turn, make growth and fast IPO. So venture capitalists need to consider the background of the CEO and TMT. Especially, the result shows that company relation index could be very powerful for making firm's growth with venture capital investment. It verifies that internal network make trust and in turn, is positively related to organizational performance, Therefore, this study suggests that venture capitalists should invest the company with TMT that has dense company relation among them.

In the future research, it is necessary to analyze the characteristics of UE in relation to the strategic choice and firm's performance with the various research models. In addition, while a number of studies including this paper focus on

quantitative performance of the firm. But qualitative performance (e.g., organizational commitment) needs to be analyzed as a resultant variable, which makes the UEP model more perfect theory by looking inside the organization.

REFERENCES

- Acquaah, M.(2007), “Managerial social capital, strategic orientation, and organizational performance in an emerging economy”, *Strategic Management Journal*, 28: 1235-1255
- Adler, P. S., Kwon(2002), “Social capital : Prospects for new concept”, *Academy Management Review*, 27(1) 17-40
- Bantel, K. A., & Jackson, S.(1989), “Top management and innovations in banking: Does the composition of the top team make a difference? *Strategic Management Journal*, 10: 107-124
- Baum, J. A. C., & C. Oliver(1991), “Institutional linkages and organizational mortality”, *Administrative Science Quarterly*, 36(2), 187-218
- Becker, G. S.(1972), “Investment in human capital: A theoretical analysis”, *Journal of Political Economy*, 70: 9-49.
- Bellivea, M. A., C. A. O’Reilly, & J. B. Wade(1996), “Social capital at the top: Effects of social similarity and status on CEO compensation”, *Academy of Management Journal*, 39(6), 1568-1593
- Bertrand, M. & Schoar, A.(2003), “Managing with style: The effect of managers on firm policies”, *Quarterly Journal of Economics*, 118: 1169-1208
- Bigley, G., & Wiersema, M.(2002), “New CEOs and corporate strategic re- forcing: How experience as heir apparent influences use of power”, *Administrative Science Quarterly*, 47: 707-729
- Burt, R. S.(1992), *Structural holes: The social structure of competition*. Cambridge, MA: Harvard University Press
- Carpenter, M. A.(2002), “The implications of strategy and social context for the relationship between top management team heterogeneity and firm performance”, *Strategic Management Journal*, 23: 275-284
- Coleman, J. S.(1988), “Social capital in the creation of human capital”, *American Journal of Sociology*, 94: S95-S120
- Coleman, J. S.(1990), *Foundations of social theory*, Cambridge, MA: Harvard University Press
- Collins, J., & Clark, K. D.(2003), “Strategic human resource practice, top management team social network, and firm performance: The role of human resource practices in creative organizational competitive

- advantage”, *Academy of Management Journal*, 46: 720-731
- Cyert, R. M. & March, J. G.(1963), *A Behavioral Theory of the Firm*. Englewood Cliffs, NJ:Prentice-Hall, Inc
- D’Aveni, R.(1990), “Top managerial prestige and organizational bankruptcy”, *Organization Science*, 1: 121-142
- Duchesneau, D. A. and W. B. Gartner(1990), “A profile of new venture success and failure in an emerging industry”, *Journal of Business Venturing*, 5, 297-312
- Eisenhardt, K. M., & Schoonhoven, C. B.(1990), “Organizational growth: Linking founding team, strategy, and growth among U. S. semiconductor ventures, 1978-1988” *Administrative Science Quarterly*, 35:504-529
- Finkelstein, S., & Hambrick, D. C.(1990), “Top Management Team tenure and Organizational Outcomes : the Moderating Roles of Managerial Discretion ” *Administrative Science Quarterly*, 35:484-503
- Geletkanycz, M. A., & Hambrick, D. C.(1997), “The external ties of top executives: Implications for strategic choice and performance”, *Administrative Science Quarterly*, 42: 654-681
- Gompers, P., & Lerner, J.(1997), “Venture capital and the creation of public companies: Do venture capitalists really bring more than money?”, *Journal of Private Equity*, Fall, 15-32
- Gompers, P., & Lerner, J.(2001), *The money of invention: How venture capital created new wealth*, Harvard Business Press
- Granovetter, M. S.(1985), “Economic action and social structure: The problem of embeddedness”, *American Journal of Sociology*, 91: pp.481-510
- Hambrick, D. C. & Mason, P. A.(1984), “ Upper Echelons: The Organization as Reflection of Its Top Management”, *Academy of Management Review*, Vol. 9, pp. 193-206
- Hansen, .(1999), “The search-transfer problem: The role of weak ties in sharing knowledge across organizational subunits”, *Administrative Science Quarterly*, 44(1), 82-111
- Hayward, M., & Hambrick, D. C.(1997), “Explaining the premiums paid for large acquisitions: Evidence of CEO hubris”, *Administrative Science Quarterly*, 42: 103-127
- Heller, M., W. Firestone(1995), “Who’s in charge here? Sources of leadership forchange in eight schools”, *Elementary School Journal*, 96(10): 65-86
- Hoffman, R., & Hegary, W.(1993), “Top management influence on innovations: Effect of executive characteristics and social culture”, *Journal of Management*, 19: 549-574

- Jackson, S.(1992), “Consequences of group composition for the interpersonal dynamics of strategic issues processing” In P. Shrivastava, A. Huff, & J. Dutton(Eds.)”, *Advances in strategic management*: 342-382. Greenwich, CT: JAI Press
- Jensen, M., & Zajac, E.(2004), “Corporate elites and corporate strategy: How demographic preferences and structural differences shape the scope of the firm”, *Strategic Management Journal*, 25:507-524
- Kimberly J. & Evanisko, M.(1981), “Organizational innovation: The influence of the individual, organizational, and contextual factors on hospital adoption of technological and administrative innovations”, *Academy of Management Journal*, 24: 689-713
- Kogut, B.(2000), “The network as knowledge: Generative rules and the emergence of structure” *Strategic Management Journal*, 21: 405-425
- Korea Venture Capital Association(2008), “The situation of Korean venture capital : the composition of investor in new fund”, venture capital news letter, Fall, 23-24
- Leana, C. R., & B. Barry(2000), “Stability and change as simultaneous experiences in organizations life”, *Academy of Management Review*, 25: 753-759
- Marsden, P. V.(1990), “Network data measurement” *Annual Review of Sociology*, 16, 435-463
- Mason A. Carpenter, Marta A. Geletkanycz, & Wm. Gerard Sanders(2004), “Upper Echelons Research Revisited: Antecedents, Elements, and Consequences of Top Management Team Composition”, *Journal of Management*, 30(6): 749-778th
- McDonald, M., & Westphal, J. D.(2003), “Getting by with the advice of their friends: CEOs’ advice networks and firms; strategic responses to poor performance”, *Administrative Science Quarterly*, 48: 1-32
- Mohammed, S., & B. Dumville(2001), “Team mental models in a team knowledge framework: Expanding theory and measurement across disciplinary boundaries”, *Journal of Organizational Behavior* 22; 89-106
- Murray, A. I.(1989), “Top Management Group Heterogeneity and Firm Performance”, *Strategic Management Journal*, Vol. 10, 125-141
- Nahapiet, J., and S. Ghoshal(1998), “Social capital, intellectual capital, and the organizational advantage”, *Academy Management Review*, 23: 242-266
- Oh, H. G. Labianca, & M. Chung(2004), “Group social capital and group effectiveness: The role of informal socializing ties”, *Academy of Management Journal*, 47: 860-875
- Onyx, J., & P. Bullen(2000), “Measuring social capital in five communities”,

- Journal of Applied Behavior Science*, 36(1): 23-42
- Pennings, J. M., K. Lee, & A. van Witteloostuijn(1998), "Human capital, social capital, and firm dissolution", *Academy of Management Journal*, 41(4), 425-440
- Peterson, R. S., Smith, D. B., Martorna, P. V., & Owens, P. D.(2003), "The impact of chief executive officer personality on top management dynamics: One mechanism by which leadership affects organizational performance", *Journal of Applied Psychology*, 88: 795-808
- Pettigrew, A.(1992), "On studying managerial elites", *Strategic Management Journal*, 13: 163-182
- Pfeffer, J., & G. R. Salancik(1978), *The external control of organizations of organizations*, New York: Happer and Row
- Pitcher, P., & Smith, A. D.(2001), "Top management team heterogeneity: Personality, power, and proxies"*Organization Science*, 12: 1-18
- Podolny, J. M., & Baron, J. N.(1997), "Resources and relationships: Social networks and mobility in the workplace", *American Sociological Review*, 62: 673-693
- Portes, A., & Sensenbrenner, J.(1993), "Embeddedness and immigration: Notes on the social determinants of economic action" *American Journal of Sociology*, 98: pp.1320-1350
- Reagans, R. E., & E. W. Zuckerman(2001), "Networks, diversity, and performance: The social capital of R&D teams", *Organization Science*, 12: 502-518
- Reagans, R. E., E. W. Zuckerman, & B. McEvily(2004), "How to make the team: Social networks vs. Demography as criteria for designing effective teams", *Administrative Science Quarterly*, 49: 101-133
- Rogers, E., & Shoemaker, F.(1971), "Communication of innovations", *Free Press*: New York
- Schroder, H. M., Driver, M. J. & Steufert, S.(1967), *Human information processing: Individuals and group functioning in complex social situations*, New, Holt, Rinehart & Winston
- Simmons, T., Pelled, L. H.,& Smith, K. A.(1999), "Making use of difference: Diversity, debate, and decision comprehensiveness in top management teams", *Academy of Management Journal*, 42(6): 662-673
- Smith, K. G., Grimm, C. M., Gannon, M. J., & Chen, M. J.(1991), "Organizational information processing, competitive responses, and performance in the U. S. domestic airline industry", *Academy of Management Journal*, 34: 60-86
- Tsai, W., & S. Ghoshal(1998), "Social capital and value creation: The role of intra-firm networks", *Academy of Management Journal*, 41: 464-

- Useem, E. J. Christman, E. Gold, & E. Simon(1997), "Reforming alone: Barriers to organizational learning in urban school change initiatives", *J. Ed. Students Places Risk* 2: 55-78
- Uzzi, B.(1997), "Social structure and competition in interfirm network: The paradox of embeddedness", *Administrative Science Quarterly*, 42: pp35-67
- Vesper, K. L.(1980), *New Venture Strategies*, Prentice-Hall, Englewood Cliffs, NJ
- Wiersema, M., & Bird, A.(1993), " Organizational demography in Japanese firms: Group heterogeneity individual dissimilarity, and top management team turnover", *Academy of Management Journal*, 36: 996-1025
- Woolcock, M.(1998), "Social capital and economic development: Toward a theoretical synthesis and policy framework", *Theory and Society*, 27: 151-208

FIGURE 1.
Theoretical model

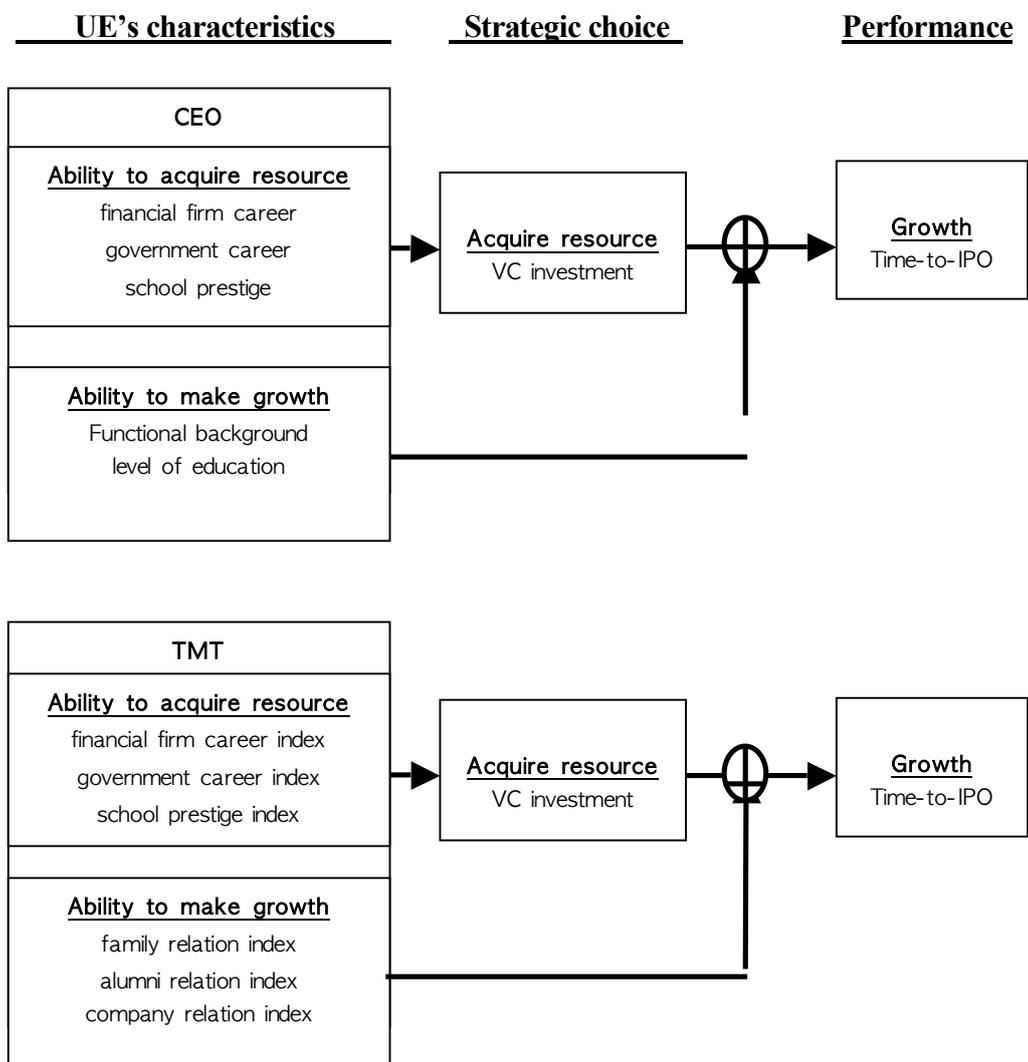


TABLE 1.
Unit of analysis and characteristics of TMT

	The preceding studies	This research
Unit of Analysis	Collectivity of individual unit	Group unit
Characteristics	Heterogeneity	Social capital

TABLE 2.
The characteristics of CEO

	The preceding studies	This research
Demography of CEO	Moderator	Independent variable

TABLE 3.
Categorization of UE characteristics

Unit	Variables	Strategy-related characteristics		Performance-related characteristics
		Strategic propensity	Strategic capability	Management capability
CEO	Age	(-)risk-averse propensity (-)globalization strategy propensity		(+) growth (+) profit
	Functional background	3.(+)managerial complexity	1.(+)strategy requiring output function 2.(+)strategy requiring	1.(+)profit in the turbulent industry 2.(+)profit in the

	1.output 2. throughput 3. peripheral		throughput function 3.(+) unrelated diversity	stable industry
	Tenure	(-)strategic choices (+)globalization strategy propensity		(+)growth and profit in the stable industry (-)growth and profit in the turbulent industry (+)post-M&A performance
	Education	(+)managerial complexity	(+)global strategy	(+)innovation capability
	Socioeconomic level	(-)M&A, unrelated diversification		(-)growth (-)profit
	Stake %			(-)revenue
	High position career		(+)alliance	
	Overseas experience		(+)globalization (+)international alliance	
	Foundation experience		(+) market exploration	
	External network .tie to intra- industry .tie to extra- industry .information gathering	(+)strategic similarity (+)strategic dissimilarity	(+)boundary spanning	(+)firm performance
	Internal social capital	(+)interaction, trust, control of offense, bounded unity, commutative norm, shared value, social control, minimization of opportunism, decrease of monitoring cost, synergy, transfer of information, cooperative problem solving, cooperation, collective behavior, shared responsibility (+)exclusivity		(+)absorption of knowledge, driving a vision, (+)firm performance, internal execution (-)survival rate
TMT	External social capital		(+)gathering information, resource, and idea	(+)forecast of uncertainty, improvement in quality, innovation, creative problem- solving, novel competition strategy, R&A (+)firm performance, survival rate, increase of revenue

				and stock price, return on asset, increasing rate of revenue
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TABLE 4.
Characteristics and measurements

Variables	Characteristics	Measurements
CEO's ability to acquire resource	financial firm career	Yes 1, No 0
	government career	Yes 1, No 0
	school prestige	Yes 1, No 0
CEO's ability to make growth	functional background	Output function 1, Throughput function 0
	level of education	Master or higher 1 Bachelor or lower 0
TMT's ability to acquire resource (external social capital)	financial firm career index	Number of financial firm career / total number of executives
	government career index	Number of government career / total number of executives
	school prestige index	Number of school prestige index / total number of executives
TMT's ability to make growth (internal social capital)	family relation index	Number of family relation / total number of internal networks
	alumni relation index	Number of alumni relation / total number of internal networks
	company relation index	Number of company relation / total number of internal networks
Acquire external	Venture capital investment	Yes 1, No 0

resource	before IPO	
Firm's growth	Period until IPO status	T_p = from establishment year to IPO yea

TABLE 5
The characteristics of CEO or TMT on acquiring external resource

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Constant	-436.971**	-440.429**	-460.501**	-457.858	-40.019**	-404.615	-348.233
Foundation year	.148***	.148***	.147***	.150***	.146***	.146***	.139***
IPO year	.072	.073	.084	.080	.065	.057	.035
CEO career							
Financial company		-1.186	-.210	-.363			
Government agency			-1.704	-1.837			
School prestige				.574**			
TMT external S.C.							
Financial company experience index					.275	.288	.447
Government agency experience index						.518	1.380
School prestige experience index							1.939***

|P|<0.1:*, |P|<0.05:**, |P|<0.01:***

TABLE 6
The mediating effect of the demographical traits of CEO and the social capitals of TMT on time-to-IPO

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Foundation year	2.599***	2.605***	2.598***	2.607***	2.604***	2.609***	2.635***
IPO year	-2.616***	-2.618***	-2.616***	-2.627***	-2.625***	-2.632***	-2.646***
VC investment	.053	.082	.045	.069	.066	.039	.063
Sales at IPO	.000	.000	.000	.000	.000	.000	.000
Operation income IPO	.000**	.000**	.000**	.000**	.000**	.000**	.000
Net income at IPO	.000**	.000**	.018**	.000*	.000**	.000**	.000
VC investment		-106					
CEO interaction							
VC*Output			.018	-.047			
VC*Education				.196			
TMT interaction							
VC*Family relation index					-2.363	-2.406	-2.617
VC*School relation index						.599	.647
VC*Company relation index							-.564*

|P|<0.1:*, |P|<0.05:**, |P|<0.01:***

The German Market for Start-up Counselling and Coaching – Experiences, Competencies, Attitudes

by Reinhard Schulte, Silke Tegtmeier¹, Carsten Wille

This study addresses start-up counsellors in order to bring to light start-up counselling practice in Germany from the counsellors' side. 2,146 start-up counsellors took part in the online-questioning. The results of our study confirm that there is light and shadow with respect to the market of start-up counselling in Germany. While only four percent participated in a supra-regional certification program and 27.9 percent checked at least one coaching or counselling instrument that does not exist as part of their work, at least 12.3 percent spend most of their working hours in start-up counselling and almost half of the participants consider start-up counselling a personal concern. The supply of certification programs in start-up counselling shows that there is a growing interest in this market. Seals of quality serve as signalling instruments in the unclear market of start-up counselling.

I: Introduction

In a long tradition it is pointed out that the entrepreneur is the main source of success in the process of venture creation and its performance (Schumpeter 1934; McClelland 1961; Baumol 1968; Carland, Hoy, and Carland 1988). Furthermore, it was suggested that entrepreneurial skills and experiences are crucial for the behavior and decision making of entrepreneurs (Buchele 1967; Scherer, Adams, and Wiebe 1989). Nascent and young entrepreneurs, whether in their pre-start-up, start-up or early stage phase, are confronted with all kinds of tasks and possible problems which they have to solve in quite a short time (Hebig 2004). They typically lack management experience and knowledge concerning the start of a new venture (Chrisman and McMullan 2000; Schulte and Tegtmeier 2008). Though they wrote business plans, they normally ask for more advice (Smelzer, van Hook, and Hutt 1991) which points out a knowledge or management gap (Chrisman and McMullan 2004; Schulte and Kraus 2009). Therefore, outsider assistance – such as start-up counselling – is regarded as a valuable source to close this gap if performed properly (Chrisman and McMullan 2000).

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Outsider assistance is commonly considered as an appropriate instrument to support new ventures. Therefore, e.g. governmental programs are provided to partially finance counselling requested by new ventures. On the one hand, as start-ups are not financially strong they often have difficulties to get funding for their new venture. On the other hand, private sector counsellors do not get paid well for their services if not supported by such a program. It occurs that for this reason they mostly do not specialize in start-up counselling.

The German market for start-up counselling is quite heterogeneous (Anderseck 2009). Advice for start-ups is offered by all kinds of institutions and individuals such as chambers of commerce or crafts, regional organizations for economic development, tax accountants, attorneys, credit institutions, management consultants, business incubators, science parks, or special departments at universities (Peters 2009; Schulte and Kraus 2009). Due to the fact that the occupational title “start-up counsellor” or “consultant” is not proprietary, almost everyone can use it to acquire clients. Up to now, there are no standards or minimum requirements for such an occupation in Germany.

Although it can be said who is allowed to provide this service (nearly everyone), it cannot be said who actually does start-up counselling. Furthermore, it is quite unclear what kind of motivation lies behind start-up counselling or how it is done. As there has not been any study about this, yet, this survey is a first attempt to highlight the German market for start-up counselling. It aims at describing providers and modalities to gain a better understanding of it.

II: State of Research

At first, the subject of this survey will shortly be defined. Start-up counselling can be regarded as a special case of management consultancy. In this context, start-up counselling is a service, providing external, basically managerial expertise for the start-up process. Its aim is to configure the start-up and early stage phase of a new venture by closing the managerial gap

of the would-be entrepreneur (Schulte and Kraus 2009). Therefore, the point of view has to be holistic, not focused on single functional areas, such as marketing, financing or tax issues (Peters 2009; Vereinigung Beratender Betriebs- und Volkswirte e.V. 1995).

A lot has been written on the subject of the abilities, experiences, or the human resources an entrepreneur features (e.g., McClelland 1961; Rotter 1966; Brockhaus 1982; for an elaborated review see Tegtmeier 2008). Unlike this, findings about the existing or required competences, experiences, or attitudes of start-up counsellors are scarce (Anderseck 2009). Broadening the focus of assisting and advising small and medium enterprises (SME), the diagnosis changes only very little. Though, there have been quite some studies on the subject of counselling and external advice or assistance conducted by Small Business Development Center (SBDC) programs in the USA (e.g. Robinson 1982; Chrisman, Nelson, Hoy, and Robinson 1985; Nohavandi and Chesteen 1988; Chrisman 1989; Chrisman and Katrishen 1994; Chrisman and McMullan 2000; Chrisman and McMullan 2004). Furthermore, there are some studies on business incubators (e.g. Rice 2002) or the personal business advisers (PBA) provided by British Link and other supporting initiatives, individuals, professional service firms, and governmental agencies (e.g. Smallbone and North 1995; Mole 2002; an overview was given by Bennett and Robson 1999). However, these findings are containing only rough considerations about the necessary attributes and the backgrounds of start-up or SME counsellors. Though, according to the authors SME and new ventures both are supported by these programs and persons. So, this may be an approach for further conclusions.

Rice (2002) stated that the incubator managers who are supplying assistance for entrepreneurs “are well educated [...] and [...] had prior entrepreneurial and/or business counselling experience [...]”. Mole (2002) asserted that most business advisors recruited by British Link came to their posts with business experience in SMEs. Furthermore, these advisors pass through a continued process of professional development for a minimum of 60

hours per year (Bushell 1995). Moreover, as pointed out by Gibb (1997), effective trainers or counsellors must develop empathy for their clients.

According to Chrisman and McMullan (2004), the characteristics expected by the Pennsylvania SBDC program for their employed advisors are to hold an advanced degree (e.g. MBA, PhD) in order to be capable and experienced in the development of new and small enterprises. The intervention supplied should be more in counselling than in a consulting manner. That means the counsellor facilitates his clients' task performance ability rather than performing the task himself. It may occur that he also completes some work for his clients, but his primary contribution is mentoring. Furthermore, it is expected by this program that an effective start-up counsellor continuously engages in professional development for at least 40 hours (Chrisman and McMullan 2004).

In an attempt to gain a theoretical basis for professional start-up counselling Peters (2009) pointed out that the counsellor has to meet similar demands according to the findings above: knowledge, experience, and ability. Beyond this, he adds the concept (*counselling-approach*) which means the way how the counselling is accomplished.

Regarding these findings, it can be concluded that there are primarily three attributes for efficient counsellors: *competence* which is based on education and training to collect knowledge and on the ability to use instruments and methods performing counselling, *experience* coming from prior occupations in SME and consulting firms and *attitude* towards the special issues of the new venture client. The last point is added considering the fact that start-up counselling usually does not yield much money referred to the capacities needed.

In our survey we refer to these three attributes for efficient counsellors. The paper proceeds as follows. First, the research design will be presented. Afterwards, the empirical results will be revealed. A lot of descriptive data characterizes the questioned start-up counsellors. In addition, we build some summary indexes on some critical aspects.

Furthermore, regression analyses have been conducted to explain the counsellors' competences. The paper closes with a short discussion and some conclusions.

III: Research Design

As target group of our study we made use of German-wide on- and offline databases of counsellors delivering start-up counselling according to their own marketing statements. As online database we used the database of start-up counsellors listed at the German Kreditanstalt für Wiederaufbau (www.kfw-Mittelstandsbank.de) developed in cooperation with the German Federal Ministry of Economics and Technology (bmwi). E-mail addresses can be taken from the website where counsellors can be found sorted by German regions. In addition, we refer to the offline database of the German-wide "Bundesverband Deutscher Unternehmensberater e.V." (German Association of Business Counsellors) where we detected start-up counsellors as well. Via online-questioning we addressed 5,912 start-up counsellors in Germany. By sending a reminder 14 days later we could improve the response rate. 2,146 start-up counsellors answered the questionnaire (response rate: 36.3 percent). The questionnaire contains 30 questions concerning the counsellors' personal characteristics, the start-ups who the counselling is offered to, the application of counselling and coaching instruments, the counsellors' (continuing) education, seals of quality and certification programs in start-up counselling, the counsellors' former experiences, reasons for offering start-up counselling, the amount of start-ups served to on average, the percentage of working time availed on business start-up counselling (instead of corporate counselling – established firms), the percentage of total turnover gained with start-up counselling, and others. The questionnaire predominantly consists of items with a closed ending format with some additional items using open ended formats. As empirical evidence about start-up counselling in Germany is widely missing, this work is highly explorative.

III: Empirical Results

Characteristics of Start-up Counsellors – Descriptive Results – Summary Indexes

The structure of our data set is as follows (valid cases each, see tables one to four):

Nearly 80 percent of the questioned start-up counsellors are male and with about half of the group most of the questioned counsellors are between 36 and 50 years old. Note that the youngest counsellor reported his age with 18 and the oldest with 78 years. More than 74 percent of the questioned counsellors offer their services during the (pre-) start-up phase as well as during the phase of establishing companies. Many counsellors offer services to small companies (up to nine employees: 82 percent, from 10 to 49 employees: 72 percent). Only 11.9 percent offer services to companies with more than 250 employees. 82 percent of the start-up counsellors got a higher education degree while 40.1 percent do have a commercial (vocational) education (as well). 53.5 percent did their studies in economics whereas 16.4 percent graduated in jurisprudence and about 20 percent graduated in engineering. On average, the questioned counsellors spent 14.75 days for their own continuing education during the last 12 months. Remarkably, more than 70 percent spent more than five days for continuing education and with 72.7 percent even more of them intend to spend more than five days on continuing education in the upcoming twelve months. 30.2 percent of the questioned counsellors think that seals of quality in start-up counselling are decisive to client acquisition while only 20.7 percent do not regard seals of quality as overestimated. 4.1 percent have already passed at least one of the five supra-regional and well-known certification programs. With three percent the certificate offered by the “Verband freier Berater/ Die KMU-Berater” is the most common one. On average, the start-up counsellors have got 8.69 years of counselling-related experience as employees of a company while they average 3.37 years of experience in a corporate counselling and 5.61 years of experience gained through a start-up on their own. On average, they work for 12.22 start-ups per year. At least 12.3 percent spend

most of their working hours in start-up counselling and 10.6 percent of the questioned start-up counsellors gained more than 50 percent of their total turnover on business start-up counselling (instead of corporate counselling). Hence, in most cases start-up counselling is a supplement to the counsellors' work for established firms.

Questioned why they primary offer start-up counselling, 41.2 percent confirm that it supplements other fields of business. 46.1 percent of the sample considers start-up counselling as a personal concern. Only 2.0 respectively 1.7 percent highlight that start-up counselling enhances their reputation or that it promises good gaining prospects.

Table six focuses on statements related to counselling performance. 36.7 percent of the questioned counsellors stated that they attribute the success of a business start-up to their own counselling performance. Only half of the questioned group states that they ask the entrepreneurs to hand in a rough concept before the first counselling meeting. With 80.8 percent most of them conduct feedback meetings after each completed consultation.

We used five items to measure the counsellors' attitudes with respect to seals of quality for start-up counselling (see table five). About one third of the questioned counsellors agreed to the statements "seals of quality are of great importance for customer acquisition", "certification programs for business start-up counselling are important for improving competences", "good business start-up counsellors should be certificated", and "seals of quality reduce the in-transparency in the business start-up counselling market and hence, improve the quality of business start-up counselling". However, only 20.7 percent do not consider seals of quality as overestimated. Unsurprisingly, this item correlates negatively with all the aforementioned items concerning seals of quality. Out of these five items we calculated a Likert scale as a summary attitude index with respect to seals of quality for start-up counselling (value range {5; 25}). Table five depicts that this is more or less a normal distribution with 40.3 percent scoring above average and 20.4 percent scoring higher than 18

that is, the upper third with a positive attitude regarding seals of quality. Surprisingly, the attitude index does not correlate with coaching and counselling competences measured by skills and application of coaching and counselling instruments. These measurements have been carried out as follows.

To measure coaching competences, we named six coaching instruments among them three of which do not exist, such as degression techniques, synergy model, and valence analysis. As real notable instruments we used system modelling, context modelling or comparable reflection techniques, and role or communication modelling. These coaching instruments are commonly used in Germany. We built a coaching competence index as summary index composed out of “correct” answers concerning these instruments (value range {0; 6}). Counsellors who apply all existing coaching instruments and who at the same time did not mark any of the not existing ones got six points. These persons were titled as counsellors with a high coaching competence. Table eight depicts frequencies and percentages of this coaching competence index. 63.9 percent of the participants scored higher than value three and hence, these start-up counsellors have got a high coaching competence.

In a similar way, we measured the start-up counsellors’ business expertise by listing six counselling instruments three of which do not exist, such as gravitation analysis, Duesseldorf’s Method, and the Erdmeier Model. As real instruments we provided liquidity and success planning, business planning (including market and customer analysis), and legal form analysis. We built a business expertise index by summing up the “correct” answers concerning these instruments (value range {0; 6}). Counsellors who considered all existing counselling instruments as essential for start-up counsellors and who at the same time did not mark any of the not existing ones got 6 points. These persons were titled as counsellors with a high business expertise. Table nine depicts frequencies and percentages of this business expertise index. 96.4 percent of the participants scored higher than value three and hence,

measured this way, almost each start-up counsellor has got a high business expertise concerning start-up counselling. With 5.32 the mean is higher than for the coaching competence index with 4.02.

Additionally, we calculated an overall competence index by adding the coaching competence index with the business expertise index. 93.0 percent of the participants have got an overall competence which is higher than seven. The minimum is five index points (value range {0; 12}). Note that 27.9 percent checked at least one coaching or counselling instrument that does not exist as part of their work.

Further Analyses – Statistical Coherences

To find factors influencing the start up counsellors' competence, we estimated linear regressions for the coaching competence index, the business expertise index, as well as the overall competence index. Table eleven shows the regression results for the coaching competence index. Including a large number of potential explanatory variables, only 3.8 percent of the variance of the coaching competence index can be explained ($R^2=0.038^{***}$). Females, corporate counsellors, technology counsellors, and business academy as professional education are predictors in the final model, technology counsellors influencing the coaching competence negatively.

Table twelve depicts the regression results for the business expertise index. 10.4 percent of the variance of the business expertise index have been explained through linear regressions ($R^2=0.104^{***}$). Tax counsellor, corporate counsellor, technology counsellor, counsellor of the Chamber of Crafts, lawyer, and bank counsellor as counselling categories, a commercial apprenticeship as professional education, as well as no training qualification are predictors of the business expertise. Technology counsellors featured significantly lower competence levels in business expertise.

Finally, table 13 depicts the regression results for the overall competence index. Including a large number of potential explanatory variables, 5.7 percent of the variance of the overall competence index can be explained ($R^2=0.057^{***}$). Five statistically significant variables explain the overall competence index: technology counsellor, corporate counsellor, and tax counsellor as counselling categories, female (sex), and business academy as professional education. To be a technology counsellor has got a significantly negative effect whereas the other aforementioned variables have got a positive effect on the overall competence index.

IV: Conclusions and Implications

The results of our explorative study confirm that there is light and shadow with respect to the market of start-up counselling in Germany. While only four percent participated in a supra-regional certification program and 27.9 percent checked at least one coaching or counselling instrument that does not exist as part of their work, at least 12.3 percent spend most of their working hours in start-up counselling and almost half of the participants consider start-up counselling a personal concern. The supply of certification programs in start-up counselling shows that there is a growing interest in this market. Seals of quality serve as signalling instruments in the nondistinctive market of start-up counselling.

In this study we did not measure the success of start-up counselling. This should be geared to the success of the new venture itself (as well as to the fact that a business with low prospects of success will not be launched). For this measurement longitudinal follow-up studies have to be conducted. This is why we intended to measure the counsellors' competence, built as an index about knowledge of coaching and counselling instruments. We are aware that this can only be a first approach and that it has to be confirmed by following studies including data on counselling performance.

As another limitation of this German wide study it has to be stated that we restricted our questioning on the counsellors' view. It is therefore subjective and does not include the founders' view on start-up counselling. Future research should focus on this group as well and bring both views together.

References

- Anderseck, K. (2009). "Professionalisierung der Gründungsberatung – ein Ansatz zur Qualitätssicherung", in *Gründungsberatung – Beiträge aus Forschung und Praxis*. Ed. K. Anderseck and S. A. Peters. Stuttgart: Ibedem, 11-38.
- Baumol, W. J. (1968). "Entrepreneurship in economic theory," *American Economic Review*, 58, 64-71.
- Bennett, R. J., and P.J. A. Robson (1999). „The use of external business advice by SMEs in Britain," *Entrepreneurship and Regional Development* 11 (2), 155-180.
- Brockhaus, R. H. (1982). "The psychology of the entrepreneur," in *Encyclopedia of Entrepreneurship*, Ed. C. A. Kent, D. L. Sexton, and K. H. Vesper, Englewood Cliffs, NJ: Prentice-Hall, 39-57.
- Buchele, R. (1967). *Business policy in growing firms*. Scranton, PA: Chandler Publishing Company.
- Bushell, M. (1995). "Developing Personal Business Advisors: An Insider's View," *Small Business and Enterprise Development*, 2, 165-173.
- Carland, J. W., Hoy, F., and J. C. Carland (1988). "Who is an entrepreneur?" is a Question worth asking," *American Journal of Small Business*, 12 (4), 33-39.
- Crismann, J. J. (1989). "Strategic administrative and operation assistance: The value of outsider consulting to pre-venture entrepreneurs," *Journal of Business Venturing*, 4 (November), 401-418.
- Chrisman, J. J., and F. Katrisha (1994). "The economic impact of Small Business Development Center counseling activities in the United States: 1990-1991," *Journal of Business Venturing*, 9 (4), 271-280.
- Chrisman, J. J., and W. E. McMullan (2000). "A preliminary assessment of outsider assistance as a knowledge resource: The long-term impact of new venture counselling," *Entrepreneurship Theory and Practice*, 24 (3), 37-53.
- Chrisman, J. J., and W. E. McMullan (2004). "Outsider assistance as a knowledge resource for new ventures," *Journal of Small Business Management*, 42 (3), 229-244.
- Chrisman, J. J., Nelson, R. R., Hoy, F., and R. B. Robinson (1985). "The impact of SBDC consulting activities," *Journal of Small Business Management*, 23 (July), 1-11.
- Gibb, A. A. (1997). "Small firm training and competitiveness: Building upon the small business as a learning Organisation," *International Small Business Journal*, 15 (2), 13-29.
- Hebig, M. (2004). *Existenzgründungsberatung. Steuerliche, rechtliche und wirtschaftliche Gestaltungshinweise zur Unternehmensgründung*. Bielefeld: Erich Schmidt.
- McClelland, D.C. (1961). *The achieving society*. Princeton, NJ: Van Nostrand.
- Mole, K. (2002). "Business advisers' impact on SME's: An agency theory approach," *International Small Business Journal*, 20 (2), 139-162.
- Nahavandi, A., and S. Chesten (1988). The impact of consulting on small business: A further examination," *Entrepreneurship: Theory and Practice*, 13 (Fall), 29-40.
- Peters, S. A. (2009). "Der Gründungsberater – ein konzeptioneller Ansatz zum Berufsbild," in

- Gründungsberatung – Beiträge aus Forschung und Praxis*. Ed. K. Anderseck, and S. A. Peters. Stuttgart: Ibedem, 39-50.
- Rice, M. P. (2002). "Co-production of business assistance in business incubators: An exploratory study". *Journal of Business Venturing*, 17, 163-187.
- Robinson, R. B. (1982). "The importance of outsiders' in small firm strategic planning," *Academy of Management Journal*, (March), 80-93.
- Rotter, J. B.: Generalized Expectancies for Internal Versus External Control of Reinforcement, *Psychological Monographs: General and Applied*, 80 (1), 1966, 1-28.
- Scherer, R. F., Adams, J. S., and F. A. Wiebe (1989). "Developing entrepreneurial behaviours: A social learning theory perspective," *Journal of Organizational Change Management*, 2 (3), 16-27.
- Schumpeter, J. A. (1934). *The Theory of Economic Development*. Cambridge: Harvard University Press. (New York: Oxford University Press, 1961.) First published in German, 1912.
- Schulte, R., and S. Kraus (2009). "Unternehmensberatung für Gründungsunternehmen: Eine Übersicht über das Berufsfeld der Gründungsberatung," in *Gründungsberatung – Beiträge aus Forschung und Praxis*. Ed. K. Anderseck and S. A. Peters. Stuttgart: Ibedem, 51-81.
- Schulte, R., and S. Tegtmeier (2008). "Theorien zur Unternehmensgründung," in *Stand und Perspektiven der deutschsprachigen Entrepreneurship- und KMU-Forschung*. Ed. K. Gundolf and S. Kraus. Stuttgart: Ibedem, 118-134.
- Smallbone, D., and D. North (1995). "Targeting established SME's: Does their age matter?" *International Small Business Journal*, 13 (3), 47-64.
- Smeltzer, L R., Van Hook, B. L., and R. Hurt (1991). "Analysis of the Use of Advisors as Information Sources in Venture Start-Ups," *Journal of Small Business Management* 29 (July), 10-20.
- Tegtmeier, S. (2008). *Die Existenzgründungsabsicht. Eine theoretische und empirische Analyse auf Basis der Theory of Planned Behavior*. Edition Gründungsforschung, Vol. 3, Marburg: Tectum (Ph.D. dissertation, Leuphana University Lüneburg, 2008).
- Vereinigung Beratender Betriebs- und Volkswirte e.V. (1995). *Grundsätze ordnungsmäßiger Gründungsberatungen – GoG*, 3. 3rd version, <http://www.vbv.de/>. Accessed on April 30, 2009.

Tables

Table 1
Characteristics of Start-up Counsellors/Descriptives – Part One

Characteristics with Values	percent (based on valid cases)	n
Sex:		2027
male:	79.1	
female:	20.9	
Age (grouped afterwards):		2021
18 to 35 years:	10.3	
36 to 50 years:	49.1	
51 to 65 years:	37.4	
66 to 78 years:	3.2	
Listed in start-up counselling database^a:		1986
Kreditanstalt für Wiederaufbau:	89.9	
Bund deutscher Unternehmensberater:	4.1	
Other:	28.1	
Counselling in stage^a:		1963
Pre-seed stage:	82.1	
Seed stage:	92.6	
Establishment stage:	91.3	
Clients' business sizes^a:		1953
Up to 9 employees:	87.4	
From 10 to 49 employees:	71.9	
From 50 to 249 employees:	34.0	
As of 250 employees:	11.9	
Counselling category^a:		1942
Tax counsellor:	13.4	
Corporate counsellor:	86.0	
Lawyer:	2.8	
Counsellor of the Chamber of Industry and Commerce:	5.7	
Counsellor of the Chamber of Crafts:	3.7	
Technology counsellor:	9.0	
Bank counsellor:	5.6	
Other:	26.4	

^a multiple answers possible.

Table 2
Characteristics of Start-up Counsellors/Descriptives – Part Two

Characteristics with Values	percent (based on valid cases)	n
Professional education^a:		1936
University:	48.9	
University of applied sciences:	33.1	
Business academy:	11.4	
Commercial apprenticeship:	40.1	
Technical apprenticeship:	11.3	
Other:	14.9	
No training qualification:	0.5	
Field of study (if university degree)^a:		1932
Economics:	53.5	
Jurisprudence:	5.2	
Engineering:	16.4	
Other:	20.8	
No university degree:	18.0	
Days used for on-the-job training during the <i>last</i> 12 months:		1819
0 days:	3.1	
1-5 days:	26.6	
6-10 days:	28.5	
11-20 days:	27.1	
21-30 days:	9.4	
31-60 days:	3.7	
61-200 days:	1.2	
201-365 days:	0.4	
Days scheduled for on-the-job training for the <i>next</i> 12 months:		1819
0 days:	2.4	
1-5 days:	24.9	
6-10 days:	30.1	
11-20 days:	28.4	
21-30 days:	8.8	
31-60 days:	3.9	
61-200 days:	1.1	
201-365 days:	0.4	

^a multiple answers possible.

Table 3
Characteristics of Start-up Counsellors/Descriptives – Part Three

Characteristics with Values	percent (based on valid cases)	n
Programs for counselling certification already gained:		
Postgraduate course start-up counselling Open University Hagen:	0.7	1517
Certificated start-up counselling of the Bundesqualitätszirkel Gründungsberatung e.V.:	0.7	1439
Enigma Q-plus Counsellor Certificate for Small and Medium Sized Companies (Q+):	0.6	1399
Certificate of the Verband Deutscher Gründungsinitiativen:	0.8	1389
Certificate of the “Verband freier Berater/ Die KMU-Berater”:	3.0	1532
Useful experiences gained for business start-up counselling:		
Employed in a company – not counselling (in years):		1707
0 years:	26.2	
1-5 years:	20.8	
6-10 years:	20.0	
11-20 years:	24.2	
>= 21 years:	8.8	
Employed in a corporate counselling (in years):		1708
0 years:	53.1	
1-5 years:	25.1	
6-10 years:	12.9	
11-20 years:	7.6	
>= 21 years:	1.3	
In a former start-up (in years):		1709
0 years:	31.2	
1-5 years:	33.1	
6-10 years:	17.9	
11-20 years:	14.6	
>= 21 years:	3.2	
Business start-ups served to on average as a business start-up counsellor per year:		1687
<= 10:	73.5	
11-30:	18.5	
31-50:	4.6	
51-100:	2.7	
101-450:	0.7	

Table 4
Characteristics of Start-up Counsellors/Descriptives – Part Four

Characteristics with Values	percent (based on valid cases)	n
Percentage of working time approximately availed on business start-up counselling (rest corporate counselling):		1693
<= 20 percent:	59.0	
21-50 percent:	28.7	
> 50 percent:	12.3	
Percentage of total turnover gained with start-up counselling (rest corporate counselling):		1615
<= 20 percent:	66.9	
21-50 percent:	22.5	
> 50 percent:	10.6	
Business start-up counselling primary offered because...		1589
... it supplements other fields of business (e.g. corporate and tax counselling):	41.2	
... it enhances reputation:	2.0	
... of good gaining prospects:	1.7	
... it is a personal concern to support business start-ups:	46.1	
Other reasons:	9.1	

Table 5
Statements Concerning the Topic “Seals of Quality for Start-up Counselling”

% Answering the Item Above Average (> 3 on 5-Point-scale)	frequency	percent	mean	n
Seals of quality are of great importance for customer acquisition.	537	30.2	3.01	1780
Certification programs for business start-up counselling are important for improving competences.	566	32.0	2.91	1768
Seals of quality are overestimated. (scored in reverse: 5: do not agree)	365	20.7	2.60	1758
Good business start-up counsellors should be certificated.	608	34.4	2.92	1767
Seals of quality reduce the in-transparency in the business start-up counselling market and hence, improve the quality of business start-up counselling.	598	34.2	3.02	1748

Table 6
Statements Concerning the “Counselling Performance”

% Answering the Item Above Average (> 3 on 5-Point-scale)	frequency	percent	mean	n
I attribute the success of a business start-up to my counselling performance.	575	36.7	3.32	1569
Before the first counselling meeting I ask the entrepreneurs to hand in a rough concept.	781	49.8	3.34	1569
I try to conduct feedback meetings after each completed consultation.	1267	80.8	4.30	1569

Table 7
Attitude-Index Concerning the Topic “Seals of Quality for Start-up Counselling”

Values (value range: {5;25})	frequency	percent
5-10	346	20.2
11-17	918	53.5
18-25	449	26.4

n=1713; mean: 14.45, stand. dev.: 4.69.

Table 8
Coaching Competence Index

Values (value range: {0; 6})	frequency	percent
1	3	0.2
2	44	2.4
3	620	33.6
4	590	32.0
5	430	23.3
6	158	8.6

n=1845; mean: 4.02, stand. dev.: 1.01.

Table 9
Business Expertise Index

Values (value range: {0; 6})	frequency	percent
1	0	0.0
2	1	0.1
3	63	3.4
4	133	7.2
5	782	42.6
6	856	46.6

n=1835; mean: 5.32, stand. dev.: 0.76.

Table 10
Overall Competence Index

Values (value range: {0; 12})	frequency	percent
5	1	0.1
6	42	2.3
7	86	4.7
8	345	18.8
9	515	28.1
10	494	26.9
11	280	15.3
12	72	3.9

n=1835; mean: 9.34, stand. dev.: 1.31.

Table 11
Multiple Regressions on the Coaching Competence Index

Variable	Coefficient	Standard error	Standardised coefficient
Sex: female	0.347***	0.060	0.139***
Counselling category: corporate counsellor	0.322***	0.071	0.109***
Counselling category: technology counsellor	-0.218*	0.087	-0.060*
Professional education: business academy	0.162*	0.076	0.051*

n=1706; ***/**/* denote significance on the 0.1 percent, 1 percent, and 5 percent level respectively; $R^2=0.038$ ***.

Excluded variables: year of birth; counselling categories: tax counsellor, lawyer, counsellor of the Chamber of Commerce and Industry, counsellor of the Chamber of Crafts, bank counsellor; professional education: university, university of applied sciences, commercial apprenticeship, technical apprenticeship, no training qualification; on-the-job training during the last 12 months; former experiences: as employee in a company in years (not counselling), as employee in a corporate counselling in years, in a former start-up in years.

Table 12
Multiple Regressions on the Business Expertise Index

Variable	Coefficient	Standard error	Standardised coefficient
Counselling category: tax counsellor	0.566***	0.056	0.263***
Counselling category: corporate counsellor	0.399***	0.055	0.186***
Counselling category: technology counsellor	-0.259***	0.062	-0.098***
Professional education: commercial apprenticeship	0.102**	0.035	0.068**
Counselling category: counsellor of the Chamber of Crafts	0.217*	0.091	0.056*
Professional education: no training qualification	-0.622**	0.234	-0.061**
Counselling category: lawyer	0.225*	0.104	0.051*
Counselling category: bank counsellor	0.156*	0.076	0.048*

n=1706; ***/**/* denote significance on the 0.1 percent, 1 percent, and 5 percent level respectively; $R^2=0.104$ ***.

Excluded variables: sex; year of birth; counselling category: counsellor of the Chamber of Commerce and Industry; professional education: university, university of applied sciences, business academy, technical apprenticeship; on-the-job training during the last 12 months; former experiences: as employee in a company in years (not counselling), as employee in a corporate counselling in years, in a former start-up in years.

Table 13
Multiple Regressions on the Overall Competence Index

Variable	Coefficient	Standard error	Standardised coefficient
Counselling category: technology counsellor	-0.523***	0.111	-0.113***
Counselling category: corporate counsellor	0.663***	0.099	0.176***
Counselling category: tax counsellor	0.444***	0.099	0.117***
Sex: female	0.284***	0.075	0.090***
Professional education: business academy	0.226*	0.096	0.056*

n=1706; ***/**/* denote significance on the 0.1 percent, 1 percent, and 5 percent level respectively; $R^2=0.057$ ***.

Excluded variables: year of birth; counselling categories: lawyer, counsellor of the Chamber of Commerce and Industry, counsellor of the Chamber of Crafts, bank counsellor; professional education: university, university of applied sciences, commercial apprenticeship, technical apprenticeship, no training qualification; on-the-job training during the last 12 months; former experiences: as employee in a company in years (not counselling), as employee in a corporate counselling in years, in a former start-up in years.

New Venture Based Learning: An Experiential Pedagogy for High-Growth Entrepreneurship

David Gibson, Jonathan M. Scott & Aisling Harkin

We describe how enterprise educators can facilitate more effective entrepreneurial learning for students while they are concurrently in the process of starting a new venture, hence enhancing its growth potential. We demonstrate why our uber-experiential New Venture Based Learning approach is the most effective pedagogy to impact upon individuals' motivation – and their ability – to enhance their entrepreneurial knowledge and, ultimately, the subsequent performance and growth of their new venture. We conclude the paper with a summary and some practical recommendations for the implementation of this experiential pedagogy for high-growth entrepreneurship.

Introduction

This paper presents the practical and theoretical rationale for the development of a new pedagogical model of New Venture Based Learning (NVBL). The paper thus seeks to answer the following research question: *Can enterprise¹ educators more effectively facilitate entrepreneurial learning for students while they are in the process of starting a new venture, rather than in a 'pre-start' educational intervention?* The authors are currently developing a new-venture-based-learning MSc in New Venture Creation, as well as undertaking research into this model in the Nordic context (Scott et al, 2009). This paper, therefore, addresses the research question by building theory (a pedagogical model), with enterprise education as the dependent variable and student-entrepreneurs as the unit of analysis.

Work-based learning has evidently been successful in promoting employability and enterprising behaviours at UK higher education institutions (Moreland, 2005; Little, 2006; Nixon *et al*, 2006). This approach has primarily been aimed at Undergraduate programmes, in which there is an element of work experience or an employer placement. However, this is usually geared towards students working in other businesses rather than their own, and learning from external mentors and internal managers. Two exceptions to this rule follow. The first is the BA Enterprise Development at the University of Huddersfield which will be running for the first time in September 2009. In this

¹ In this paper we use the terms “new venture creation”, “enterprise” and “entrepreneurship” interchangeably to refer to both the process of creating and growing a new venture, and to the specific set of skills and competences required to do so successfully. Entrepreneurial learning is: “an experiential process where enterprising individuals continuously develop their entrepreneurial knowledge throughout their professional lives” (Politis, 2008: 45).

programme, students screen opportunities in the first year, plan and start up their new venture in the second, and run the venture in their third year. Secondly, the Student Placements for Entrepreneurs in Education (SPEED) programme run from the University of Wolverhampton which provides enterprise placements for Undergraduates, with mentoring and financial support, so that students can start their own business, rather than working for someone else. Another example, which we discuss later in the paper, is the one-year Foundation for Management Experience (FME) programme for first year students that Babson College runs (Neck and Stoddard, 2006) which

“was created in 1996 to give all first year, undergraduate students an integrated view of business management The focus of FME is on opportunity recognition, resource parsimony, team development, holistic thinking and value creation through harvest. The vehicle of learning is a limited duration business start up steeped in entrepreneurial thinking and a basic understanding of all functions of business. Because FME is a required course, all first year undergraduates experience the entire cycle of entrepreneurship. The course is a blend of theory and practice, which forms the basis for the entire Babson undergraduate core curriculum.

“A total of 13 faculty with core expertise in information technology, entrepreneurship, management, marketing, accounting, and finance are involved in teaching, coordinating and running the course Each business team receives an initial loan up to \$3000 from the College to launch and run their business which is organized like a company with a CEO and different departments managed by vice presidents. In May, all profits are donated to a community service organization chosen by the students in each business. In addition to the donation of money, each student is required to give six hours of their time working with their chosen community service organization

“Since its inception FME businesses have evolved from selling cookies on campus to negotiating contracts with suppliers in China. Average revenue and profit for FME businesses are \$5,500 and \$2,000 respectively; however, businesses have earned as much as \$30,500 in revenue and \$18,000 in profit in a 12 week period. Most importantly, the FME businesses are able to make a significant impact on their local communities Since 1999, 2,520 FME students have donated to \$218,263 and more than 15,000 hours of their time to community service organizations.”

(Neck and Stoddard, 2006, pp. 1-2; p. 6)

Our New Venture Based Learning model can, therefore, enable established learning models – such as Kolb’s (1984) learning cycle – and more recent conceptual developments (e.g. Politis’s (2008) process model of entrepreneurial learning) to be applied to two *combined and concurrent* processes of enterprise education and new venture creation by developing students’ enterprise skills while they are *concurrently* creating a new venture. Henry *et al* (2003) reviewed different approaches to delivering enterprise education programmes; discussed whether or not enterprise can be taught (see also Henry *et al*, 2005a, b); and highlighted the importance of measuring the effectiveness of such pedagogic interventions. They discuss of Jamieson’s categorisation of:

- “**education about enterprise**: awareness creation ... educating students on the various aspects of setting up and running a business mostly from a theoretical perspective.
- “**education for enterprise**: the preparation of aspiring entrepreneurs for a career in self-employment with the specific objective of encouraging participants to set-up and run their own business.
- “**and education in enterprise**: management training for established entrepreneurs and focuses on ensuring the growth and future development of the business.” (Henry *et al*, 2003: 92-93).

The New Venture Based Learning pedagogical model, however, proposes developing a Masters-level programme that sits somewhere between “education *for* enterprise” and “education *in* enterprise.” As such, it would provide entrepreneurial learning and mentoring for people *concurrently* starting up a new venture and there will be active engagement between the student, the tutors and the mentors to ensure optimal entrepreneurial strategising and implementation of the business plan for the new venture. In starting a new venture, the entrepreneur bears risks (Knight, 1921) by discovering and exploiting opportunities (Kirzner, 1997), has a high need for achievement (McClelland, 1961) and perhaps even, through dynamism and sustainable competitive advantage, leads to creative destruction, ultimately causing established players to fail (Schumpeter, 1934). For some time, there has been interest in new venture creation and the enterprise culture in the UK and, in particular, the role of Government in promoting business start-up (Her Majesty’s Stationery Office, 1971; Storey, 1994; Greene *et al*, 2008). It has, however, been suggested that Government-backed business support has been suboptimal (National Audit Office, 2006; Richard *et al*, 2007). While Bennett (2008) queries its value for money, Richard (2008: 5), who is himself one of the Dragons of the BBC’s *Dragons Den*, proposes the replacement of the current bureaucratic architecture with ‘a single, web-based Business Information Service.’ Indeed, the bard of entrepreneurial research, Gartner (2008), notes:

“Hey! What about the U.K.? (Blackburn & Smallbone, 2008)
“Small is beautiful” is not just a matter of testament, (Schumacher, 1974)
Small firms help an economy be resilient.
Birch’s study on small firms was an astonishment (Birch, 1979)
That job growth was an important argument,
For SME research to become more pertinent.
The Bolton report points out the predicament
That new and small firms have not been salient
In the discussion of making the U.K. more affluent.
Much of U.K. research appears to be driven,
By how much the national government has given,
So that spurring evidence-based policy’s development,
U.K. research explores whether government choices are relevant.”

Whilst there is evidence that business support from the UK Government-run Business Link can contribute to firm growth (Mole *et al*, 2008), owner-managers are more likely to trust accountants and solicitors than public-sector business support organisations (Bennett and Robson, 2004; Scott and Irwin, 2009). Moreover, the role of trust is important in that effective business advice and mentoring – generally, from private sector sources such as accountants – is key to business survival and growth (Deakins *et al*, 1998; Gartner *et al*, 1999). Not having access to external advice from experienced advisers or mentors – to help them make the correct decisions – is a significant barrier for nascent small firms (British Chambers of Commerce (BCC), 2008). Furthermore, formal ‘pre-start’ business planning can improve business survival rates (Castrogiovanni, 1996). Hence, for owner-managers and potential entrepreneurs, social capital and networks (Anderson *et al.*, 2007; Casson and Della Giusta, 2007; Greve and Salaff, 2003), mentors and advisors that they trust (Welter and Smallbone, 2007) are highly important in ensuring the growth and survival of their new ventures. In terms of the theoretical context to small firm growth, Gibrat (1931) found that a firm’s size and its rate of growth were not mutually influential, i.e. there was no significant relationship, and indeed this law has been reinforced by other studies. Greiner’s (1972) model emphasised five stages of business growth, each triggered by a crisis: creativity; direction; delegation; co-ordination and collaboration. Other research supports the importance of stage models of SME growth (Churchill and Lewis, 1987; McMahan, 1998; Morgan and Roberts, 1997). An alternative approach, however, was suggested by Macpherson (2005) who considered:

“how the case companies managed transition and innovation in organizational systems in order to resolve specific crises and facilitate growth ... [R]ather than sequential crises, these firms were dealing with a number of crises concurrently, and solutions were significantly dependent on *existing experience and systems of organising, managers’ perception of the crises, and access to relevant knowledge.*”

Macpherson’s analysis leads on to the main argument of this paper in which we propose our model by considering how entrepreneurial knowledge is generated, through ‘existing experience’ and social networks (‘access to relevant knowledge’, as he suggests).

The remainder of the paper is structured as follows. Section 2 critiques existing provision of Masters level enterprise education and identifies what is wrong with current pedagogical approaches to enterprise education. Section 3 focuses more specifically on how New Venture Based Learning marries the teaching and learning processes together in the form of our pedagogical model, building on existing research into enterprise education, entrepreneurial learning, and the effectiveness of both the learning and teaching processes. Finally, Section 4 provides a summary of our principal arguments, as well as some practical and pedagogical recommendations for how this model can (and will) be implemented.

Existing Enterprise Education: For ‘Thinkers’, Not ‘Doers’

Higher education institutions (HEIs) are another important source of advice and support for those considering starting a new venture. HEI enterprise education – and, in particular, pedagogical approaches – has been the subject of considerable interest by academics and amongst the reviews of the subject are a number of significant contributions (for example, Dainow, 1986; Scott and Twomey, 1988; Plaschka and Welsch, 1990; Solomon et al, 1994; Gorman et al, 1997; Kolvereid and Moen, 1997; Vesper and Gartner, 1997; Leitch and Harrison, 1999; Laukkanen, 2000; Hannon et al, 2004; Hytti ja Kuopusjärvi, 2004; Bécharde and Grégoire, 2005; Henry et al 2005a, b; Akola and Heinonen, 2006; Hannon, 2006; Hannon et al, 2006; Van Auken et al, 2006; Botham and Mason, 2007; Bridge and McGowan, 2007; Hannon, 2007; Pittaway and Cope, 2007a,b; Smith, 2007; European Commission, 2008; Herrmann et al, 2008; Hussain et al, 2008; Scott and Hussain, 2008; Pittaway et al, 2009). So what exactly is wrong with existing Masters level enterprise education provision in the UK and, by implication, much of the Undergraduate enterprise education?

An analysis of the outlines of Masters level enterprise education courses in the UK (Gibson *et al*, 2009) found that these programmes tend to cover functional areas such as marketing, innovation, finance, as well as risk management and resource management (Queen’s University Belfast, 2009). In addition, such courses are full-time, 12 months, of which 9 months are taught and 3 months of dissertation preparation, normally a business plan (*ibid*). The methods of delivery include lectures, discussion groups, individual and group practical exercises, case studies, and business simulation (*ibid*). A key point emerging from the analysis is that almost all courses are couched in the language of “pre-start”, “thinking of starting a business”, “planning to start up”, with the exception of Queen Margaret University (Edinburgh)’s MBA Entrepreneurship, which does refer to the possibility of people who run their own business enrolling on the course. However, none of these MSc/MBA courses is tailored to those who are in the process of running a nascent, new venture – they are largely geared towards “preparation” or imbuing students with “entrepreneurial” skills to start up a business. Several programmes have a specific focus upon international, strategic or technology entrepreneurship. They are predominantly theoretical and dissertation based and, indeed, one (Master of Enterprise (MEnt) at The University of Manchester) is research-based. *Most of these programmes are clearly aimed at – using the language of the Household Survey of Entrepreneurship (NOP, 2004) – “thinkers” (those thinking of starting a business), not “doers” (those who actually are doing so).*

However, two examples of good practice are the MSc Entrepreneurship and MSc Social Enterprise offered by the University of Huddersfield. These programmes provide a healthy balance of practice and theory, along with sensible learning and teaching methods, including case studies,

guest lectures by entrepreneurs and, perhaps most importantly, they are delivered largely by Business School staff (i.e. practitioners with business experience). The provision of enterprise education in England has been mapped (Hannon et al, 2006) and good practice in the area has been extensively documented (Botham and Mason, 2007). A major concern that has emerged is whether existing enterprise education is ‘effective’ (Henry et al, 2003) and the importance of providing solid ‘entrepreneurial outcomes’ (Hannon, 2007; Pittaway and Cope, 2007b; Pittaway and Hannon, 2008). Whilst many of the above studies have examined how universities have approached enterprise education and its pedagogies, Laukkanen (2000) has advocated that HEIs adopt an explicit strategy of business generation. In this regard, Herrmann et al (2008: 7) proposed that:

“Developing entrepreneurial teaching and learning practices demands a shift from transmission models of teaching (learning ‘about’) to experiential learning (learning ‘for’) and offers students techniques that can be applied in the real world. Our report calls for learning approaches that incorporate practical examples from outside the university into the classroom, and offer reflective practice, ownership and opportunity to students A project or practice-based learning process, rather than one that is theoretical, makes learning relevant to a range of applications Immersion in practice places the practitioner at the centre of the learning experience. The use of drama and performance techniques is an essential part of the entrepreneurial learning process as many entrepreneurs are continually ‘acting’ and ‘performing’ in their many roles.” (Herrmann et al, 2008: 21)

These suggestions have clear implications for the delivery of effective enterprise education with solid entrepreneurial outcomes (Henry et al, 2003; Hannon, 2007; Pittaway and Cope, 2007b; Pittaway and Hannon, 2007). It appears, based on our analysis above, that most UK Masters level enterprise education provision is simply not practice-based enough in order to provide the entrepreneurial learning and entrepreneurial outcomes that are required, and that they are simply not effective pedagogical approaches – furthermore, they are overly oriented towards ‘thinkers’ (who may not even start a business) rather than ‘doers’. Given the nature of graduate enterprises (Rosa, 2003; Mason et al, 2007) and the deficiencies of much enterprise education provision, it is perhaps not surprising that the graduate-run ventures are “hardly likely to make the Japanese tremble” (Rosa, 2003). What if, as Akola and Heinonen (2006: 16) suggest, “Different assignments (e.g., working on a business idea or a plan) do not support learning if they are not embedded in a real-life situation, and are easily considered artificial and useless”? We now explore the process and outcomes of entrepreneurial learning and develop our pedagogical model of New Venture Based Learning.

New Venture Based Learning: An Experiential Pedagogy

Entrepreneurial learning can be conceptualised as a complex transformative process in which career experience is converted into entrepreneurial knowledge (Politis, 2008). While traditionally the process of entrepreneurial learning has (with organizational learning) been conceptualised as operating within the context of learning in an existing business or new venture (Leitch and Harrison, 2008), we argue that effective entrepreneurial learning can also occur within a university context where a student is involved concurrently in creating a new venture. Indeed, it is clear that the entrepreneur's 'personal development' should be a central consideration when designing enterprise education programmes (Rae and Carswell, 2000). But surely the most effective means of enhancing entrepreneurial learning is while an individual is actually in the process of creating and growing a new venture? As we discussed earlier, whilst formal 'pre-start' business planning can improve business survival rates (Castrogiovanni, 1996), the key *pressure points* at which mentors and advisers can contribute to optimal growth and survival of a small firm is by providing the advice and mentoring *while the business is operating*, not before (Deakins et al, 1998; Gartner et al, 1999; BCC, 2008), and mentoring and coaching can enhance enterprise education effectiveness (Fleischmann, 2008). Hence, drawing upon David Birch's statement that "If you want to encourage entrepreneurship, it should be through some kind of apprenticeship" (Aronsson, 2004: 289), Hindle (2007) suggests that universities could offer such an apprenticeship and, indeed, asks: "Is the culture of the business school an immutable constant, or could business schools be induced to adapt and diversify their educational approaches to suit different subject matter and different student needs using different approaches than those that currently prevail?"

We agree with the approach of both Birch and Hindle in that student/entrepreneurs can more effectively learn how to be better owner-managers in a real-world business environment. Although case studies, business simulations, and other forms of experiential or reflective learning can enhance entrepreneurial learning, only a genuine 'apprenticeship' can provide optimal entrepreneurial learning. Before we consider some of the different forms of experiential and reflective pedagogies, we first examine the field of entrepreneurial learning.² Much of this literature has been influenced by Kolb's experiential learning model (Kolb, 1984) in which people learn in cycles and through a process of reflection and review (e.g. Jones-Evans et al, 2000; Cope and Watts, 2000; Pittaway and Cope, 2007; and Politis, 2008).

² Given the paucity of literature on entrepreneurial learning, we are grateful for the Harrison and Leitch (2008) volume, which has provided key insights into this field.

A number of key themes in entrepreneurial learning can be highlighted, such as problem-solving, learning from the expertise of others, experiential learning, endogenous versus exogenous learning [or inter- versus intra-organisational learning (Leitch and Harrison, 2008: 10-16)], absorptive capacity, and knowledge transfer from large organisations through supply chains etc (Easterby-Smith, 2008). Indeed, Easterby-Smith (2008, p. xxi) flags up several key current debates, such as:

- “Measurable links between learning processes and organisational performance”;
- “The process view”: “how groups and teams learn over time” and “communities of practice”; and
- “creativity and innovation.”

It is all three of these debates that our paper makes a contribution to, in particular in relation to how learning processes through enterprise education can enhance the performance of the new venture which a student is creating, and the role of creativity and innovation. Our argument is simple, in that through real-life experiential learning / new venture based learning (i.e. the process of starting a new venture), the student/entrepreneur can enhance his or her prospects of being more successful, and growing the firm (or at least surviving in its early years as it seeks stability). It is quite clear that we can contribute to the entrepreneurial learning process as it applies to creativity and innovation, at which high-technology, high-growth ventures ought to be particularly effective. Such an experiential approach would also be of benefit to mid-career entrepreneurs, with their different learning styles (Rae, 2005).

Linking back to the key themes that Easterby-Smith highlighted, we also seek to contribute both to entrepreneurial learning in the new venture’s ‘internal processes’ (endogenous) and ‘outside the boundaries’ of the firm (exogenous). The former relates to how our student/entrepreneurs learn from the process of starting their own firm, in terms of what goes on inside this new business. And the latter to how they can learn from others – clearly, this might include not only lecturers and mentors/coaches, but also other individuals and stakeholders that they encounter (customers, suppliers, potential financiers (e.g. business angels), and even competitors). The role of social capital and networking cannot, therefore, be overestimated.

Leitch and Harrison (2008) review the agenda for research in entrepreneurial learning. Whilst they highlight that organisational learning research is “burgeoning” (p3), there is little research into entrepreneurial learning, and they make a most valid point in that, “progress in research on entrepreneurial learning will be achieved better through a robust focus on context-of-application-based problems than attempts to develop grandiose integrative theories within a single

powerful paradigm” (ibid, p. 5). Our model of New Venture Based Learning does not seek in any way to be a “grandiose integrative theor[y]” (ibid, p. 5), but rather is very much a practice-based, experiential model of entrepreneurial learning in the context of an individual who starts up their own new venture (as an entrepreneur), whilst also participating in an *uber*-experiential Masters programme which aims to enhance the effectiveness of their entrepreneurial learning to contribute to the successful future performance of their venture. Indeed, Leitch and Harrison (2008: 4), in summarising the work of Eliasson (1996, 1998), suggest that entrepreneurs must learn in order to build their capacity in a number of key competences – “awareness, resource acquisition, and management” – to “*create* (innovation), *recognize* (risk capital provision, *diffuse* (spillovers) and *successfully exploit* (receiver competence)”. It is abundantly clear that such key competences are central to any entrepreneur who is ‘learning by doing’. Entrepreneurial learning can be ‘enhanced through peripheral vision’, which is “a cultivated disposition for attending to the hidden, the obscured and overlooked”, which “can be systematically cultivated through education strategies that deliberately direct attention away from the visible gestalt figures of comprehension to the unformed and the seemingly invisible background against which figure, identity and meaning emerge”, or a “*negative pedagogy*” (Chia, 2008, p. 27).

Politis (2008, p. 44-45) makes a clear distinction between entrepreneurial knowledge, and the experiential learning that creates such knowledge, and indeed, highlights, a lack of research on “how entrepreneurs experience, through experience, develop entrepreneurial knowledge that enables them to recognize and act on entrepreneurial opportunities and to organize and manage new ventures.” While Politis (2008) is inevitably (as are we) influenced by Kolb (1984)’s model of reflective learning and ‘experiential acquired knowledge’ – indeed, many of us are thus members of the Kolbian school of thought – she does make it clear that,

“attempts to stimulate entrepreneurial activities through formal training and education is not likely to have an strong and direct impact on the development of entrepreneurial knowledge ... [but] should primarily focus on developing creativity, critical thinking and reflection among individuals, which in turn can have a profound influence on both their motivation and ability to develop entrepreneurial knowledge throughout their professional lives” (Politis, 2008, p. 65).

Whilst it is beyond the scope of this paper to explain in detail Politis’s model (Politis, 2008), it is nonetheless a most useful conceptualisation of the ‘dynamic’ process of entrepreneurial learning, “an experiential process where enterprising individuals continuously develop their entrepreneurial knowledge throughout their professional lives” (Politis, 2008, p. 45). In this process, Politis (2008) highlights the importance of entrepreneurial knowledge itself (recognising opportunities in a Kirznerian sense (e.g. Kirzner, 1997), but also ‘coping with the liabilities of

newness, i.e. risk (Knight, 1921)), career experience (which is about ‘learning by doing’ whether it is prior new venture creation experience, management or sectoral experience), as well as a number of key “factors influencing the transformation process.”

Whilst Politis’s (2008) model is highly informative, and indeed is Kolb’s (1984) seminal reflective learning model, what we have developed is a model which brings together the process of entrepreneurial learning (e.g. Politis, 2008), reflective learning (Kolb, 1984), in parallel with an individual creating a new venture whilst also participating in a Masters level programme. New Venture Based Learning is, therefore, about the entrepreneurial learning process (Politis, 2008), not just via an ‘exogenous’ source (Easterby-Smith, 2008) (via tutors and mentors) but also through ‘endogenous’ learning (ibid) as student-entrepreneurs engage in reflective learning (Kolb, 1984) on their new venture in the learning environment of a university. New Venture Based Learning is, therefore, a form of entrepreneurial learning which provides a symbiotic relationship between endogenous and exogenous sources of entrepreneurial knowledge, experience, or the entrepreneurial process itself. Thus, we distinguish ‘pedagogic’ (through the classroom) entrepreneurial learning from new venture based – through actually starting and running a new venture – entrepreneurial learning. It is also possible to conceptualise ‘pedagogic’ entrepreneurial learning as essentially enhancing the Bourdieuan ‘institutionalised cultural capital’ (i.e. education) of the entrepreneur (Bourdieu, 1986; Elam 2008), whilst the ‘social capital’ based entrepreneurial learning operates through exogenous networking with individuals from outside the firm. A third form is straightforward ‘cultural capital’ based entrepreneurial learning (cultural capital encompassing ideas and experience), where the entrepreneur learns from his or her own experience (as Politis, 2008, theorises).

Essentially, as Bourdieu considered the forms of capital as bridging a nexus between *society* (social, material, cultural aspects), on the one hand, and the *individual* (economic, social, cultural and symbolic capital³), on the other, (Bourdieu, 1986; Elam, 2008), then our fusing of entrepreneurial learning and the forms of capital goes a long way to explaining how this process can influence an individual entrepreneur’s Bourdieuan capital reserves. There is also convertibility, according to Bourdieu, where economic capital buys cultural capital such as education (Elam, 2008).

That gives weight to the notion that entrepreneurial learning (as with learning *per se*) is a “socio-cultural practice rather than an individual cognitive activity” (McHenry, 2008: 76), and:

“the social-cultural perspective of learning differs from the individualist approach as it emphasises that human beings are social, interactive individuals and that learning is embedded in practice” (ibid, p. 80).

³ This is a little more esoteric but essentially Elam (2008) explains it as, “legitimacy, social approval, prestige, status, symbolic power”, which in itself can lead to “structured social action.”

Therefore, interaction and practice-embedded learning (McHenry, 2008) in the process of entrepreneurial learning (Politis, 2008) are central to how New Venture Based Learning can be operationalised. Traditionally, university programmes in entrepreneurship and small business are simply too focused on “pre-start” to enable effective entrepreneurial learning. Indeed, as Akola and Heinonen (2006) suggest, such educational approaches may be “artificial” and, in some cases, “useless” or, as Hindle (2007), following Birch, argues, there is, instead, a need for entrepreneurial apprenticeships. We would argue that any such Masters programmes should not be called “Entrepreneurship” or “New Venture Creation”, but rather “Business Planning”. As important as pre-start business planning is to the survival of the new venture (Castrogiovanni, 1996), we reiterate that advice and mentoring is effective to the actual operation of the business (Deakins et al, 1998; Gartner *et al*, 1999; BCC, 2008). And, since one should match the type of assessment to learning outcomes (Pittaway et al, 2009), assessment in NVBL is, necessarily, intimately connected to implementing the new venture.

The three broad approaches to enterprise education – i.e. (i) lectures, (ii) experiential learning through role play/drama and simulation & gaming, and (iii) running a genuine business – vary in the degree to which they are experiential, reflective and, therefore, effective for promoting entrepreneurial learning. It is not only the two UK examples we outlined earlier that involve students starting a real life business. Fisher et al (2008: 313) remind us that Babson College “require students to start up and run actual businesses”, which are closed down at the end of the course. In a sense then, these are disposable businesses.

Indeed, Fisher et al (2008: 315) also evaluate two Undergraduate classes at what they term, “the far end of the experiential spectrum”, where “students start and run actual businesses, and receive funds from and report to real investors”. Hence, we have developed Figure 1, to illustrate this “experiential spectrum” to which Fisher et al are implicitly referring. In other words, we can do the lectures, which can become slightly more interactive, particularly by including cases. But these still are “not likely to have a strong and direct impact on the development of entrepreneurial knowledge” (Politis, 2008: 65).

However, moving rightwards, towards the *uber*-experiential, role plays/drama and simulation and gaming do start to provide the “creativity, critical thinking and reflection among individuals”, which Politis (2008: 65) argues will then “have a profound influence on both their motivation and ability to develop entrepreneurial knowledge throughout their professional lives,” Finally, New Venture Based Learning is bound to have even more significant impacts upon individuals’ motivation – and their ability – to enhance their entrepreneurial knowledge (Fisher et al, 2008; Politis, 2008).

**Figure 1: The Spectrum of Experiential Entrepreneurial Learning in Enterprise Education:
From Lectures to New Venture Based Learning**

Non-experiential										Uber-experiential (Real life)	
1	2	3	4	5	6	7	8	9	10		
<u>Teaching:</u>		Lectures		Case Studies	Role Play/Drama	Simulation & Gaming*	Disposable Firms**	New Venture Creation			
<u>Assessment:</u>				<i>Assignments</i>				<i>Reflection</i>		<i>Mentoring</i>	
Enterprise Education <u>only</u> (pre-start)		✓		✓	✓		✓	✓	?	✗	
=====											
New Venture Based Learning (EE + NVC)		✓		✓	✓	✓		✓	✓		
=====											
New Venture Creation <u>only</u>									✓	✓	

* networking, business games, etc

** real firms that are started up (e.g. at Babson) but are closed down at the end of the course.

Source: developed by authors (after Fisher et al, 2008)

A learning-by-doing, reflective, and experiential approach is clearly so much more appropriate (Cope and Watts, 2000; Cope, 2005), while maintaining academic and pedagogical rigour, i.e. students should be able to apply enterprise theory, research findings, and practice to starting their new venture (Fiet, 2001a, 2001b). Contemporary enterprise education does, therefore, go as far as highly experiential simulation and gaming. In most cases, this stops at simulation and gaming; in others, such as at Babson College, real firms are started but these are disposable because, in essence, they are not owned by the students and when they are closed down any surplus is donated to charity. Such philanthropy clearly has benefits for the charities concerned. On the other hand, starting a genuine new business, which is owned by the student/entrepreneur will change their behaviour and clearly enhance their entrepreneurial learning. For most universities, there is a huge chasm between enterprise education and real life new venture creation. New Venture Based Learning (indicated in bold on Figure 1) attempts to bridge this chasm by offering students the support and mentoring to start their own business, while receiving enterprise education (and a Masters level qualification) which is directly relevant to that new venture. It is thus *uber-experiential*.

Summary and Recommendations

In this paper we have presented the practical and theoretical rationale for the development of a new pedagogical model of New Venture Based Learning by answering the research question: *Can enterprise educators more effectively facilitate entrepreneurial learning for students while they are in the process of starting a new venture, rather than in a 'pre-start' educational intervention?* In so doing, we have made a number of key contributions to the debate on entrepreneurial learning in the university context, which we highlight below.

First, it has become clear that much enterprise education provision in the UK (with a few notable exceptions) is for 'thinkers', not doers. Such programmes focus upon "pre-start" and "thinking of starting a business" and usually require the submission of a business plan. It is plainly obvious that this process does not mean that students will make the active step of actually starting a new venture – and, even if they do, there will be no support for them from their former institutions. Although UK enterprise education has been mapped, good practice has been documented, and the most effective pedagogical approaches have been articulated, predominantly through the sterling efforts of the National Council of Graduate Entrepreneurship, notably the prolific Professor Paul Hannon, and associates (Hannon et al, 2006; Botham and Mason, 2007; Herrmann et al, 2008), we have highlighted major concerns about the nature of the UK's Masters level enterprise education provision. It appears, based on our analysis above, that most UK Masters level enterprise education provision is simply not practise-based enough in order to provide the entrepreneurial learning, effective pedagogy and 'entrepreneurial outcomes' (Henry et al, 2003; Hannon, 2007; Pittaway and Cope, 2007b; Pittaway and Hannon, 2008) that are required.

Second, drawing upon the entrepreneurial learning and experiential learning literature (Kolb, 1984; Cope and Watts, 2000; Jones-Evans et al, 2000; Rae and Carswell, 2000; Pittaway and Cope, 2007; Chia, 2008; Easterby-Smith, 2008; Leitch and Harrison, 2008; McHenry, 2008; Politis, 2008), we have argued that effective entrepreneurial learning can also occur within a university context where a student is involved concurrently in creating a new venture. We have supported this argument by highlighting the connection between both pre-start business planning (Castrogiovanni, 1996) and advice and mentoring *while the business is operating* (Deakins et al, 1998; Gartner *et al*, 1999; BCC, 2008), on the one hand, and the effective implementation of a new venture and, therefore, its optimal survival and growth prospects, on the other. Indeed, "some kind of apprenticeship" (Aronsson, 2004: 289; Hindle, 2007) can provide effective entrepreneurial learning. In particular, Politis's (2008) process model is of importance in that it conceptualises the factors that are involved in the entrepreneurial learning process in which experience is converted into entrepreneurial knowledge.

Third, we have argued that through real-life experiential learning and new venture based learning (i.e. the process of starting a new venture), the student/entrepreneur can enhance his or her prospects of being more successful, and growing the firm (or at least surviving in its early years as it seeks stability). Mentoring can contribute to entrepreneurial learning in the new venture's 'internal processes' (endogenous) and 'outside the boundaries' of the firm (exogenous) (Easterby-Smith, 2008). Our model is a practice-based, experiential model of entrepreneurial learning in the context of an individual who starts up their own new venture (as an entrepreneur), whilst also participating in an *uber*-experiential Masters programme which aims – for example, through, given the necessity of connecting assessment to learning outcomes (Pittaway et al, 2009), linking assessment directly to the new venture – to enhance the effectiveness of their entrepreneurial learning to contribute to the successful future performance of their venture. As such, it would provide entrepreneurial learning and mentoring for people *concurrently* starting up a new venture and there will be active engagement between the student, the tutors and the mentors to ensure optimal entrepreneurial strategising and implementation of the business plan for the new venture.

Fourth, we have distinguished 'pedagogic' (through the classroom) entrepreneurial learning from new venture based – through actually starting and running a new venture – entrepreneurial learning. Indeed, we have considered the relevance of Bourdieu's forms of capital (Bourdieu, 1986; Elam 2008) to the entrepreneurial process and have emphasised the importance of understanding entrepreneurial learning as a process that essentially relies upon socio-cultural capital (supported by McHenry, 2008: 76). Therefore, interaction and practice-embedded learning (McHenry, 2008) in the process of entrepreneurial learning (Politis, 2008) are central to how New Venture Based Learning can be operationalised.

Fifth and finally, we have explained the different approaches to enterprise education on a spectrum of experiential learning (cf Fisher, 2008). The three broad approaches – lectures; role play/drama and simulation & gaming; and running a genuine business – vary in the degree to which they are experiential, reflective and, therefore, effective for promoting entrepreneurial learning. We believe that our *uber*-experiential approach is the most effective in impacting upon individuals' motivation – and their ability – to enhance their entrepreneurial knowledge (Fisher et al, 2008; Politis, 2008). Whilst contemporary enterprise education in the UK does, therefore, go as far as highly experiential simulation and gaming, this is where it tends to stop. Even though Babson College in the US encourages its first year students to start businesses, these are essentially 'disposable' as, in essence, they are not owned by the students and at the end of the course they are terminated with any surplus donated to charity – but its Foundation for Management Excellence course is highly innovative and experiential.

This model is part of the innovative pedagogy strand of the ELVIS model⁴, building on the 100 per cent embedded curriculum model at Queen's University Belfast in the degree pathway of 22,000 students. The university's model was benchmarked in a Directorate General (DG) Enterprise report as a best practice curriculum model (European Commission, 2008). Enterprise is embedded within existing modules in 67 non-business disciplines at the University. The enterprise for life model has a focus on students going through the entrepreneurial process of creating, innovating and executing – with students given the choice to focus on starting their own business, social enterprise or intrapreneurial project in the corporate setting. There is an opportunity for students to learn by having an opportunity to implement their innovation through developing their own business. The difference from Babson College type models is the focus on learning, as well as business success; at Babson, students are given poor marks if they do not raise venture capital (which is very tied to American culture). As we believe that serial entrepreneurs have to learn from failure, our pedagogy – whilst aiming for success – allows students to apply the Kolb model (plan, do, and reflect) and to learn from failure, as well as success. It should not be surprising to the reader that the key recommendation emerging from this paper is that we would encourage universities not only in the UK but in other parts of Europe (and elsewhere) to introduce exploratory programmes that implement the New Venture Based Learning model. At Queen's University Belfast, we are in the process of validating a Masters programme in New Venture Creation for commencement in September 2009. Discussions between the university's Regional Office and Queen's University Management School have identified the critical need for a Masters-level programme which provides practical and academic support to graduates who have a viable idea with growth potential over the first year that they create and grow their new venture. The primary rationale for this new programme is, therefore, to meet an economic and social need within Northern Ireland for focused, practice-oriented provision of postgraduate enterprise education for graduates who have a viable business idea with growth potential. The MSc New Venture Creation builds on activity at the Undergraduate and Postgraduate level to enable students to develop the capacity to apply their project practically. The MSc New Venture Creation is in line with the regional development agency, Invest NI's, aim to create new ventures with high growth potential. We anticipate that students will have started implementing their new venture by the time they begin the course or, if not, within the first few weeks. In some cases, they will not be trading – but most should at least be looking for their first customer(s) and some may even have successfully made the first sale. Our definition of start up is that students will have registered the business whether they are actively looking for customers at that stage or not.

⁴ The acronym ELVIS refers to **E**MBEDDING Enterprise; **L**IFELONG learning skill system; **V**ALUE all resources; **I**NNOVATIVE teaching strategies/**I**nstitutional support; and **S**TUDENT centred with Alumni.

There are two potential types of students on this programme, both of whose needs will be catered for effectively through the provision of mentors and other support:

- (i) those who are ready to trade, who may have ideas which are low growth, relatively low (or medium) risk, low entry barriers (e.g. funding requirements), and are near to market; and
- (ii) those who will be non-trading for some time, who have a high-growth potential, distant from market, high risk, and may be developing a prototype or other technology which means they may not be able to start trading during the MSc.

Mentors and the Course Director will monitor the speed and robustness of the development or implementation of the new venture (through the portfolio of evidence and notes from mentor-student meetings): although not a formal part of the assessment of this MSc, such monitoring is necessary to ensure students can progress the implementation of their new venture at a satisfactory speed, and that developmental issues or barriers can be identified by an “early warning system” and resolved.

In the first semester, three modules will run concurrently, the first of which introduces students to the concepts and practicalities of entrepreneurship and more specifically to the model of New Venture Based Learning applied within the MSc New Venture Creation. At the same time, in a module on Entrepreneurial Strategy and Planning, students will gain the ability to enhance and develop their idea into a more strategic vehicle for the future development and growth of the business. The third module in the first semester will focus on Entrepreneurial Marketing & Sales, and hence students will gain the ability to undertake sales and marketing activities in an entrepreneurial way, which builds upon the existing idea.

Semester two involves three further concurrent modules. The first is on Entrepreneurial Finance, giving students the ability to obtain finance and financially manage the business. The second focuses on Innovation, i.e. the ability to be innovative to grow the new venture. The third focuses on Leadership and Management, hence providing the ability to lead and manage the new venture in a strategic and entrepreneurial manner. Finally, students will undertake a Strategic Review of their business. Throughout all modules, students will be mentored and assessed on that particular functional aspect of their new venture.

At the end of the degree course, the ‘Project’ – which is not a dissertation in the traditional sense due to its experiential, reflective and New Venture Based Learning approach – is a Strategic Review of students’ experience over the course, both of the pre-start activity, the process of starting the business and beginning to trade. Students are required to write a 15,000 word (minimum) reflective document: a Strategic Review of how successful or otherwise their strategy has been over the first year. This Strategic Review is not assessed on how successful the business has been in its first year as it is often the most difficult for many businesses. The Strategic Review will vary

depending on the type of student and how near/distant from market their idea is; level of funding required, risk, and growth potential. Furthermore, it is an opportunity for some students to review the implications of taking their idea to market. Indeed, while some students may have a real business at the end of this process (which may or may not be trading), others may rather have a refined set of ideas.

Whatever the outcome, it is clear that the *uber*-experiential pedagogical model of New Venture Based Learning can make a major difference to the entrepreneurial learning, and survival and growth prospects of the students' new venture.

Author Biographies

David Gibson is a Senior Teaching Fellow at Queen's University Belfast. He is responsible for the development and implementation of an Enterprise Curriculum model which is embedded within all disciplinary areas. He is the only national Teaching Fellow in enterprise education in the UK and his book "The Efactor" is now used at over 150 Universities worldwide as a core text. His work has been recognized internationally as best practice by the EU in December 2008. He is now an International key note speaker on Enterprise Education issues and leads all International Enterprise Education projects at Queen's. David is also a board member of the UK Enterprise Educators Board and a serial Entrepreneur.

Dr Jonathan M. Scott teaches innovation management and new venture creation at Queen's University Belfast; and is a Visiting Research Fellow at TSE Entre, Turku School of Economics, Finland in summer 2009. He has collaborated on over 20 research projects on enterprise education, innovation, and small businesses funded by public sector clients. He has co-authored papers in journals such as *International Small Business Journal* and *Environment and Planning C*, and he is a member of the editorial review board of *Gender in Management: an International Journal*.

Aisling Harkin delivers enterprise education to a diverse blend of students from Arts, Humanities, Social Sciences, and Science, Engineering and Technology disciplines. She assists in co-ordinating a range of programmes and events to promote entrepreneurship within Queen's, in addition to supporting the university Students in Free Enterprise (SIFE) team. Her career to date in the higher education sector spans three years and she has had the opportunity to work on the Queen's-Shenzhen Joint University Foundation in Management Program in China, as well as participate on the Babson Symposium for global Entrepreneurship Educators hailing from around the globe. Also, Aisling is finishing her doctorate on high growth firms within Northern Ireland.

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Bibliography

- Akola, E. and Heinonen, J. (2006) 'How to Support Learning of Entrepreneurs? A Study of Training Programmes for Entrepreneurs in Five European Countries', RENT XX conference, Brussels, November.
- Anderson, A., Park, J. and Jack, S. (2007) "Entrepreneurial social capital: Conceptualizing social capital in new high-tech firms", *International Small Business Journal*, Vol. 25, No. 3, pp. 245-272.
- Aronsson, M. (2004) 'Education matters – but does entrepreneurship education? An interview with David Birch', *Academy of Management Learning and Education*, 3(3): 289-292.
- Béchar, J-P. and Grégoire, D. (2005) "Entrepreneurship Education Research Revisited: The Case of Higher Education", *Academy of Management Learning & Education*, 4(1): 22–43.
- Bennett R.J. and Robson, P.J.A. (2004) 'The role of trust and contract in the supply of business advice', *Cambridge Journal of Economics*, 28: 471-488.
- Bennett, R.J. (2008) "SME policy support in Britain since the 1990s: what have we learnt?", *Environment and Planning C: Government and Policy* 26(2) 375–397.
- Birch, D. (1979) *The job generation process*. Cambridge, MA: MIT Program in Neighborhood and Regional Change.
- Blackburn, R. and Smallbone, D. (2008) 'Researching small firms and entrepreneurship in the UK: Developments and distinctiveness', *Entrepreneurship Theory and Practice*, 32(2): 267–288.
- Botham, R. and Mason, C. (2007) *Good Practice in Enterprise Development in UK Higher Education*, Research Report 004/2007, Birmingham: National Council for Graduate Entrepreneurship.
- Bourdieu, P. (1986) 'The forms of capital', in Richardson, J and Westport, CT (Eds) *Handbook of Theory and Practice in the Sociology of Education*, Greenwood Press: Westport CT.
- Bridge, S. and McGowan, P. (2007) *Relating Entrepreneurship Education to the Level of Entrepreneurship in a Population*, NCGE Working Paper, 027/2007, Birmingham: NCGE.
- British Chambers of Commerce (2008) *Growing Pains: What is Holding SMEs Back?*, British Chambers of Commerce: London.
- Carey, C.A., Smith, K. and Martin, L. (2007) "Supporting enterprise educators; how to promote enterprise in new areas", Paper presented at the 30th Institute for Small Business and Entrepreneurship Conference, Glasgow, November.
- Casson, M. and Della Giusta, M. (2007) "Entrepreneurship and social capital: Analysing the impact of social networks on entrepreneurial activity from a rational action perspective", *International Small Business Journal*, Vol. 25, No. 3: 220-244.
- Castrogiovanni, G.J. (1996) 'Pre-startup planning and the survival of new small businesses: Theoretical linkages', *Journal of Management*, 22(6): 801-823.

Chia, R. (2008) 'Enhancing entrepreneurial learning through peripheral vision', in Harrison, R.T. and Leitch, C. (Eds.), *Entrepreneurial Learning: Conceptual Frameworks and Applications*, Routledge, London: 27-43.

Churchill, N. and Lewis, V. (1983) 'The Five Stages of Small Business Growth', *Harvard Business Review*, May-June: 30-50.

Cope, J. (2005) 'Toward a Dynamic Learning Perspective of Entrepreneurship', *Entrepreneurship Theory and Practice*, 29 (4): 373 – 397.

Cope, J. and Watts, G. (2000) 'Learning by doing: an exploration of critical incidents and reflection in entrepreneurial learning', *International Journal of Entrepreneurial Behaviour and Research*, 6 (3): 104-24.

Dainow, W. (1986) "Training and Education of Entrepreneurs: The Current State of the Literature", *Journal of Small Business and Entrepreneurship*, 3(4): 10-23.

Deakins, D., Graham, L., Sullivan, R. and Whittam, G. (1998) 'New venture support: an analysis of mentoring support for new and early stage entrepreneurs', *Journal of Small Business and Enterprise Development*, 5(2): 151-161.

Easterby-Smith, M. (2008) 'Preface: A conversation between entrepreneurship and organisational learning', in Harrison, R.T. and Leitch, C. (Eds.), *Entrepreneurial Learning: Conceptual Frameworks and Applications*, Routledge, London, ix-xxii

Elam, A.B. (2008) *Gender and Entrepreneurship: A Multilevel Theory and Analysis*, Edward Elgar: Cheltenham.

Eliasson, G. (1996) *Firm Objectives, Control and Organization*, Kluwer: Boston. (cited by Leitch and Harrison, 2008).

Eliasson, G. (1998) *The Nature of Economic Change and Management in the Knowledge Based Information Economy*, working paper, Department of Industrial Economics and Management, KTH Stockholm. (cited by Leitch and Harrison, 2008).

European Commission (2008) *Entrepreneurship in Higher Education, Especially within Non-Business Studies: Final Report of the Expert Group*, Brussels: Enterprise and Industry Directorate-General, European Commission.

Fiet, J.O. (2001a) 'The theoretical side of teaching entrepreneurship', *Journal of Business Venturing*, 16 (1): 1-24.

Fiet, J.O. (2001b) 'The pedagogical side of entrepreneurship theory', *Journal of Business Venturing*, 16 (2): 101-117.

Fisher, S.L., Graham, M.E. and Compeau, M. (2008) 'Starting from scratch: Understanding the learning outcomes of undergraduate entrepreneurship education', in Harrison, R.T. and Leitch, C. (Eds.), *Entrepreneurial Learning: Conceptual Frameworks and Applications*, Routledge, London, 313-337.

Fleischmann, F. (2008) "Entrepreneurship as a Way of Life", key note address delivered at the "Kongress Studieren – Forschen – Gründen", German Ministry of Economics and Technology, Berlin, 1 October.

Gartner, W.B. (2008) "Entrepreneurship-Hop", *Entrepreneurship Theory & Practice*, March: 361-368.

Gartner, W.B., Starr, J.A. and Bhat, S. (1999) 'Predicting new venture survival', *Journal of Business Venturing*, 14 (2): 215-232.

Gibrat, R. (1931) *Les Inégalités Économiques*, Librairie de Recueil Sirez: Paris.

Gibson, D.G., Harkin, A. and Scott, J.M. (2009) 'Towards a Pedagogical Model of New Venture Based Learning', paper presented to the European Foundation for Management Development (efmd) Entrepreneurship Conference, Barcelona, February.

Gorman, G., Hanlon, D. and King, W. (1997) "Some Research Perspectives on Entrepreneurial Education, Enterprise Education and Education for Small Business Management: a Ten Year Review", *International Small Business Journal*, 15(3): 56-77.

Greene F.J., Mole, K. and Storey, D.J. (2008) *Three Decades of Enterprise Culture?: Entrepreneurship, Economic Regeneration and Public Policy*, Palgrave Macmillan, London.

- Greiner, L. (1972) 'Evolution and Revolution as Organisations Grow', *Harvard Business Review*, July-August, pp. 37-46.
- Greve, A. and Salaff, J.W. (2003) "Social networks and entrepreneurship", *Entrepreneurship Theory and Practice*, Fall, pp. 1-22.
- Hannon, P. (2004) "Philosophies of Enterprise and Entrepreneurship Education and the Challenges for Higher Education in the UK", paper presented at the Institute for Small Business Affairs 27th National Conference, Newcastle 2004.
- Hannon, P. (2006) "Teaching Pigeons to Dance: Sense and Meaning in Entrepreneurship Education", *Education + Training*, 48(5): 296-308.
- Hannon, P. (2007) "Enterprise for All? The Fragility of Enterprise Provision across England's HEIs", *Journal of Small Business and Enterprise Development*, 14(2): 183-210.
- Hannon, P. (2007) "Enterprise for All? The fragility of enterprise provision across England's HEIs", *Journal of Small Business and Enterprise Development*, Vol. 14, No. 2, pp. 183-210.
- Hannon, P., Brooksbank, D., Gray, C., Fuller, T., Jarvis, R., Keogh, B., Kirby, D. and Sear, L. (2004) *Making the Journey from Student to Entrepreneur: A Review of the Existing Research into Graduate Entrepreneurship*, Birmingham: National Council for Graduate Entrepreneurship.
- Hannon, P., Scott, J.M., Martin, L., Reddy, S. and Millman, C. (2006) "The state of education provision for enterprise and entrepreneurship: A mapping study of England's HEIs", *International Journal of Entrepreneurship Education*, 4: 41-72.
- Harrison, R.T. and Leitch, C.M. (Eds) (2008) *Entrepreneurial Learning: Conceptual Frameworks and Applications*, Routledge: Abingdon.
- Henry, C., Hill, F. and Leitch, C. (2003) *Entrepreneurship Education and Training*, Ashgate: Aldershot.
- Henry, C., Hill, F. and Leitch, C. (2005a) "Entrepreneurship Education and Training: Can Entrepreneurship Be Taught? Part I", *Education + Training*, 47(2): 98-111.
- Henry, C., Hill, F. and Leitch, C. (2005b) "Entrepreneurship Education and Training: Can Entrepreneurship Be Taught? Part II", *Education + Training*, 47(3): 158-169.
- Her Majesty's Stationery Office (HMSO) (1971) *The Bolton Report: Report of the Committee of Enquiry on Small Firms*, HMSO: London.
- Herrmann, K., Hannon, P., Cox, J., Ternouth, P. and Crowley, T. (2008) *Developing Entrepreneurial Graduates: Putting entrepreneurship at the centre of higher education*, Council for Industry and Higher Education (CIHE), National Council for Graduate Entrepreneurship (NCGE) and National Endowment for Science, Technology and the Arts (NESTA): London.
- Hindle, K. (2007) 'Teaching entrepreneurship at University: from the wrong building to the right philosophy', in Fayolle, A. Ed *Handbook of Research in Entrepreneurship Education*, Edward Elgar: Cheltenham.
- Hussain, J., Matlay, H. and Scott, J.M. (2008) 'Financial education and awareness in small ethnic minority businesses', *Education + Training*, 50 (8/9): 737-747.
- Hytti U., and Kuopusjärvi, P. (2004) "Three Perspectives to Evaluating Entrepreneurship Education: Evaluators, Programme Promoters and Policy Makers", paper presented at the efmd 34th EISB Conference, Turku, Finland.
- Jack, S.L. and Anderson, A.R. (1999) 'Entrepreneurship education within the enterprise culture: Producing reflective practitioners', *International Journal of Entrepreneurial Behaviour and Research*, 5(3): 110-125.
- Jones-Evans, D., Williams, W. and Deacon, J. (2000) 'Developing entrepreneurial graduates: an action-learning approach', *Education + Training*, 42: 282-288.
- Kirzner, I. (1997) 'Entrepreneurial Discovery and the Competitive Market Process: An Austrian Approach', *Journal of Economic Literature* 35: 60-85
- Knight, F.H. (1921) *Risk, Uncertainty and Profit*, Houghton Mifflin: New York.
- Kolb, D.A. (1984) *Experiential Learning: Experience as the Source of Learning and Development*, Prentice-Hall: New Jersey.

- Kolvereid, L. and Moen, Ø. (1997) "Entrepreneurship Among Business Graduates: Does a Major in Entrepreneurship Make a Difference?", *Journal of European Industrial Training*, 21(4): 154-160.
- Kuratko, D. (2005) "The Emergence of Entrepreneurship Education: Development, Trends, and Challenges", *Entrepreneurship Theory & Practice*, September: 577-597.
- Laukkanen, M. (2000) 'Exploring alternative approaches in high-level entrepreneurship education: creating micro-mechanisms for endogenous regional growth', *Entrepreneurship & Regional Development*, 12: 25-47.
- Leitch, C. and Harrison, R.T. (1999) "A Process Model for Entrepreneurship Education and Development", *International Journal of Entrepreneurial Behaviour & Research*, 5(3): 83-109.
- Leitch, C. and Harrison, R.T. (2008) "Entrepreneurial learning: a review and research agenda", in Harrison, R.T. and Leitch, C. (Eds.), *Entrepreneurial Learning: Conceptual Frameworks and Applications*, Routledge, London, pp. 3-23.
- Little, B. (2006) *Employability and Work-Based Learning*, The Higher Education Academy: York.
- McMahon, R.G.P. (1998) *Stage Models of SME Growth Reconsidered*, School of Commerce Research paper series, 98-5, The Flinders University of South Australia: Adelaide.
- Macpherson, A. (2005) 'Learning How to Grow: Resolving the Crisis of Knowing', *Technovation*, 25 (10), 1129-1139.
- Mason, C., Carter, S. and Tagg, S. (2006) "The characteristics and performance of businesses started by recent university graduates", paper presented at 20th RENT Entrepreneurship Conference, Brussels, Belgium.
- McClelland, D. (1961) *The Achieving Society*, Van Nostrand, Princeton NJ.
- McHenry, J. (2008) 'The role and management of learning from experience in an entrepreneurial context', in Harrison, R.T. and Leitch, C. (Eds.), *Entrepreneurial Learning: Conceptual Frameworks and Applications*, Routledge, London,, pp. 72-91.
- Mole, K., Hart, M., Roper, S. and Saal, D. (2008) 'Differential gains from Business Link support and advice: a treatment effects approach', *Environment and Planning C: Government and Policy*, 26(2): 315-334.
- Moreland, N. (2005) *Work-Related Learning in Higher Education*, The Higher Education Academy: York.
- Morgan, S. and Roberts, J. (1997) *Accounting for the Growth of the 'Firm'*, paper prepared for the Fifth Interdisciplinary Perspectives On Accounting Conference, Manchester, July 7-9.
- Nabi, G. (2003) "Graduate employment and underemployment: opportunity for skill use and career experiences amongst recent business graduates", *Education + Training*, Vol. 45, No. 7, pp. 371-382.
- Nabi, G., Holden, R. and Walmsley, A. (2006) "Graduate career-making and business start-up: A literature review", *Education + Training*, Vol. 48, No. 5, pp. 373-385.
- National Audit Office (2006) *Supporting Small Business*, National Audit Office: London.
- Neck, H. and Stoddard, D. (2006) "Babson College nominates The Foundation Management Experience (FME) for USASBE's Innovative Entrepreneurship Education Course", Babson College: Babson Park, MA.
- Nikolou-Walker, E. (2008) *The Expanded University: Work-based Learning and the Economy*, Pearson Education: Harlow.
- Nixon, I., Smith, K., Stafford, R. and Camm, S. (2006) *Work-Based Learning: Illuminating the Higher Education Landscape*, The Higher Education Academy: York.
- NOP (2004) *SBS Household Survey of Entrepreneurship 2003*, NOP: London.
- Pittaway, L.A. and Cope, J.P. (2007a) 'Simulating entrepreneurial learning: integrating experiential and collaborative approaches to learning', *Management Learning*, vol 38(2), 211-233
- Pittaway, L. and Cope, J. (2007b) "Entrepreneurship education – a systematic review of the evidence", *International Small Business Journal*, Vol. 25, No. 5, pp. 477-506.

Pittaway, L. and Hannon, P. (2008) "Institutional Strategies for Developing Enterprise Education: a Review of Some Concepts and Models", *Journal of Small Business and Enterprise Development*, 15(1): 202-226.

Pittaway, L., Hannon, P., Gibb, A. and Thompson, J. (2009) "Assessment practice in enterprise education", *International Journal of Entrepreneurial Behaviour & Research*, 15 (1): 71-93.

Plaschka, G. R. and H. P. Welsch (1990) "Emerging Structures in Entrepreneurship Education: Curricular Designs and Strategies", *Entrepreneurship Theory and Practice*, 14(3): 55-71.

Politis, D. (2005) , "The process of entrepreneurial learning: a conceptual framework", *Entrepreneurship Theory and Practice*, 29(4): 399-424.

Politis, D. (2008) "The process of entrepreneurial learning: a conceptual framework", in Harrison, R.T. and Leitch, C. (Eds.), *Entrepreneurial Learning: Conceptual Frameworks and Applications*, Routledge, London, pp. 44-71.

Queen's University Belfast (2009) *Programme Evaluation Documentation: MSc New Venture Creation*, Queen's University Belfast: Belfast.

Rae, D. (2005) 'Mid-career entrepreneurial learning', *Education + Training*, 47 (8/9): 562-574.

Rae, D. (2007) "Connecting Enterprise and Graduate Employability: Challenges to the Higher Education Culture and Curriculum?", *Education + Training*, 49(8/9): 605-619.

Rae, D. and Carswell, M. (2000) 'Using a life-story approach in researching entrepreneurial learning: the development of a conceptual model and its implications in the design of learning experiences', *Education + Training*, 42 (4/5): 220-227.

Richard, D. (2008) *Small Business and Government: the Richard Report*, Conservative Party: London.

Richard, D., Connell, D., Ibbetson, P., Kestenbaum, J. and Richards, A. (2007) *Richard Review on Small Business & Government: Interim Report*, Conservative Party: London.

Rosa, P. (2003) "Hardly likely to make the Japanese tremble: the businesses of recently graduated university and college entrepreneurs", *International Small Business Journal*, 21 (4): 435-459.

Schumacher, E.E. (1974) *Small is beautiful: A study of economics as if people mattered*. London: Abacus.

Schumpeter, J.A. (1934) *The Theory of Economic Development*, Harvard University Press: Cambridge MA.

Scott, J.M. and Irwin, D. (2009, in press) 'Discouraged advisees? The influence of gender, ethnicity, and education in the use of advice and finance by UK SMEs', *Environment and Planning C: Government and Policy*, 27 (1), forthcoming.

Scott, J.M., and Hussain, J. (2008) 'Ownership succession and enterprise education in UK ethnic minority family firms', paper presented at the FBE 2008 Conference 'Best Practices on Family Business and Entrepreneurship Higher Education', August 21-22, 2008, University of Jyväskylä, Finland.

Scott, J.M., Gibson, D.G., Harkin, A. (2009) 'New Venture Based Learning in the Nordic Context: A Pedagogy for High-Growth Venturing', submitted to 20th Annual NFF Nordic Academy of Management, Turku, Finland, August.

Scott, M. G. and Twomey, D. F. (1988) "The Long Term Supply of Entrepreneurs: Students' Career Aspirations in Relation to Entrepreneurship", *Journal of Small Business Management*, 26(4): 5-12.

Smith, K. (2007) "Supporting E-Learning in Enterprise: The TE3 Project", *Education + Training*, 49(8/9): 656-670.

Solomon, G. (2006) 'Are We Teaching Small Business Management to Entrepreneurs and Entrepreneurship to Small Business Managers?', United States Association for Small Business and Entrepreneurship (USASBE), White Paper Series, USABE, Boca Raton, FL.

- Solomon, G.T., Weaver, K.M. and Fernald, L.W. (1994) 'A historical examination of small business management and entrepreneurship pedagogy', *Simulation & Gaming*, 25(3): 338-252.
- Storey, D.J. (1994) *Understanding the Small Business Sector*, Routledge: London.
- Van Auken, H., Fry, F.L. and Stephens, P. (2006) "The influence of role models on entrepreneurial intentions", *Journal of Developmental Entrepreneurship*, Vol. 11, No. 2, pp. 157-167.
- Vesper, K. and Gartner, W. (1997) "Measuring Progress in Entrepreneurship Education", *Journal of Business Venturing*, 12: 403-421.
- Welter, F. and Smallbone, D. (2006) "Exploring the role of trust in entrepreneurial activity", *Entrepreneurship Theory and Practice*, July, pp. 465-475.

The Impact of the Entrepreneur's Emotional Intelligence and Providing Employee Benefits

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Abstract

Emotional intelligence (EI) instruments allow researchers to assess a person's ability to identify and manage their emotions and respond to others. However, the literature lacks any discussion of the impact of an entrepreneur's EI on his or her employees. Specifically, we conducted an exploratory study looking at successful entrepreneurs' EI and the benefits offered to their employees. We hypothesize that high EI entrepreneurs create a better working environment for employees as the entrepreneurs are aware of their employees' needs and can find non-monetary ways of offering support, but this relationship is moderated by firm size.

Introduction

Emotional intelligence (EI) instruments allow researchers to assess a given person's ability to identify and manage their emotions and respond to others. However, the literature lacks any discussion of the impact of an entrepreneur's EI on his or her employees. Specifically, we conducted an exploratory study looking at successful entrepreneurs' EI and the benefits they offered to their employees. We believe that high EI entrepreneurs create a better working environment for employees, more like a family culture, as the entrepreneurs are aware of their employee's needs and can find non-monetary ways of offering emotional support. Such a method may be time-intensive, but it is also cost-effective, allowing the entrepreneurs to build loyalty among their employees while saving money on an expensive aspect of human resource management.

However, as firms grow in size, entrepreneurs cannot meet with their employees as often, resulting in an erosion of the family culture which affects the firm as it grows. Thus, firm size should moderate the relationship between the EI of a company's entrepreneur and the number of benefits offered. We hypothesize that larger firms must offer more benefits than their smaller counterparts, holding the entrepreneur's EI constant. Often, entrepreneurial firms failed to realize the impact of human capital on the bottom line efficiency and profits.

Poorly human capital management can just as easily lead to the failure of the business and the entrepreneur. The human resource management extant research addresses the relationship between large firms offering various human capital benefits and success of the firm, but fails to adequately address the same phenomenon among entrepreneurial firms, including the

affect the individual entrepreneur's emotional intelligence has on which and how many benefits entrepreneurs of extremely fast growing firms provide their employees.

Emotional Intelligence

Early contributions providing the theoretical foundation for emotional and social intelligence (ESI) include Thorndike's (1920) conception of *social intelligence*, McClelland's (1973) and Boyatzis' (1982) *competencies*, Gardner's (1983) *personal intelligences*, and Sternberg's (1985) *practical intelligence*. McClelland (1973) and Boyatzis (1982) introduced an inductive way of determining the underlying capabilities of a person in producing effective performance. The characteristics, called competencies, had both an unconscious intent and alternate behavior outcomes, depending on the situational demands. The competencies that distinguished outstanding performance in management, leadership, and professional jobs in many countries included abilities in the personal, social, and cognitive arena (Seals, Boyatzis, Bailey, 2009).

What is Emotional Intelligence (EI)?

Bar-On (1985) is credited as the first author to coin the term emotional quotient (EQ), often used interchangeably with EI. He helped provide the theoretical link between earlier conceptions of social intelligence (SI) and later conceptions of EI. Bar-On (1985) proposed that overall emotional and social functioning could be measured using 15 competencies that factor into the five key components: (1) intrapersonal; (2) interpersonal; (3) stress management; (4) adaptability; and (5) general mood (Seals, Boyatzis, Bailey, 2009). The greater the number of effective EQ competencies, then "the more positive the prediction for effective functioning in meeting environmental demands and pressures" (Bar-On, 2000, p. 366).

Although Bar-On (1985) was the first to use the EQ designation, Salovey and Mayer (1990) are frequently cited as the originators of the modern EI construct. Salovey and Mayer (1990) defined EI as "the subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and actions" (p. 189). Today, EI is a contemporary construct, often incorporated into business, consulting, counseling, and education, due in large part to the influence of Goleman (1995; 1998). It is precisely this integration into the larger cultural fabric that necessitates continued study of the potential promise of EI (Seals, Boyatzis, Bailey, 2009). Boyatzis and Goleman (2006) focused on four broad clusters of behaviors within EI: (1) self-awareness; (2) self-management; (3) social awareness; and (4) relationship management, with 18 underlying competencies.

EI is best understood as a competency, focusing on behaviors that lead to greater social and emotional functioning. According to Boyatzis, Goleman and Rhee (2000), EI is observed "when a person demonstrates the competencies that constitute self-awareness, self-management, social awareness, and social skills at appropriate times and ways in sufficient frequency to be effective in the situation" (p. 344).

Competencies

In the purest sense, a competency is defined as a capability or ability that leads to a successful outcome. It is a set of related but distinct sets of behaviors organized around an underlying purpose or goal, called the intent. The competency paradigm emerged from a related stream of research to emotional and social intelligence, focusing on explaining and predicting

effectiveness in various occupations, often with a primary emphasis on managers, leaders, and professionals (McClelland, Baldwin, Bronfenbrenner, & Strodbeck 1958; McClelland, 1973; Bray, Campbell, & Grant, 1974; Boyatzis, 1982; Luthans, Hodgetts, & Rosenkrantz, 1988; Kotter, 1982; Spencer & Spencer, 1993). In this “competency” approach, specific capabilities that linked explanation and prediction of performance were identified and validated against effectiveness measures and then articulated as competencies (Seals, Boyatzis, Bailey, 2009).

Cherniss (2000), stated that two-thirds of competencies linked to superior performance in the workplace are emotional or social in nature. More specifically to ESI, many organizations recognize ESI as a set of emotional competencies that allow people to use emotions to facilitate desired outcomes (Fox & Spector, 2000). The list of behaviors potentially impacted by ESI includes such diverse outcomes as job satisfaction (Fisher, 2000), positive work attitudes (Carmeli, 2003), leadership potential (Higgs & Aitken, 2003), self-efficacy (Gundlach, Martinko, & Douglas, 2003), and change management (Mayer & Caruso, 2002). Given these diverse behavioral outcomes, it is clear that ESI may encompass a key career success factor for employees today. Further, this exploratory study looks at how EI in the entrepreneur affects their decisions both on the firm and their employees.

Human Relations and Benefits

Employment conditions that characterized the period from 1995-2009 changed and required entrepreneurial firms to not only offer competitive human capital benefits, but develop human capital strategies offering various benefit packages utilizing both immediate and future benefits. As labor markets loosened and a more diverse labor market emerged, there remained a large part of the United States where the demand for employees made hiring difficult. In these labor markets, human capital benefits—both immediate and long-term (future)—were still an important method by which small entrepreneurial firms could overcome labor shortages and attract and retain qualified employees.

Even in areas where labor markets were not tight, entrepreneurial firms realized that more skilled employees would be more productive and contribute significantly to the success of the entrepreneurial firm than less qualified employees. Providing employees in competitive labor markets with an equally competitive benefits package typically provided the entrepreneurial firms with a challenge to implementing a winning strategy for securing qualified employees.

To test this theory, we drew on data the 500 fastest growing entrepreneurial firms in the U.S., including demographic information of the founding entrepreneurs and the benefits each firm offers their employees. As part of a separate survey, we asked each entrepreneur to complete an EI assessment, allowing us to rank each entrepreneur’s emotional awareness. This study combines these two datasets, allowing us to determine whether entrepreneurs with high EI are able to avoid offering as many benefits as their counterparts with low EI.

The benefit to researchers will be to offer an explanation for the disparity of benefits offered across firms, despite similar levels of success of the businesses. Practitioners, on the other hand, can benefit directly from this study. By understanding the potential benefits of a high EI, entrepreneurs may incorporate our findings into their determination about the cost of developing and maintaining this trait versus the costs of offering additional benefits.

A developing line of research in entrepreneurship is looking at high-performing firms to understand how and why they are able to develop so quickly relative to their peers. One of the proposed reasons is that the employees at these firms provide not only the necessary skills for growing the business, but overall, raise the level of productivity. For example, research has

shown that employees with more training, experience, and skills help firms implement new technologies more effectively (Bartel & Lichtenberg, 1987, Siegel, Waldman, Youngdahl, 1997; Link & Siegel, 2007). Shrader and Siegel (2007) noted that the need for skilled employees is why high-performing entrepreneurial firms are more likely to be started by a team of entrepreneurs than individuals.

Despite the importance of developing, attracting, or starting with a strong team to lead to success, there is currently little research on the topic (Carlson, Upton, and Seaman, 2006). Further, research examining the relationship between human capital strategies and the success of the entrepreneurial firm has yet to show a statistical significant relationship.

One of the few conclusions that have been found is that, to ensure the culture of the firm remains entrepreneurial, a condition for encouraging rapid and on-going growth, firms need to offer their employees autonomy (Schuler, 1986). This autonomy leads to increased levels of innovation in the organization, which in turn can lead to the high levels of success found in high-performing entrepreneurial firms. Schuler further went on to note that autonomy must be further reinforced through human resource practices, including training and development, compensation, and benefits.

Schuler (1986) also discussed how firms need to ensure that the entrepreneurial climate is reinforced by rewarding those who promote and practice it. Compensation and benefits need to reflect “external equity, are flexible, contain many long-term incentives, encourage high employee participation, offer some employment security, and are administered in a more egalitarian fashion” (Schuler, 1986, pg. 624). These rewards are designed to encourage entrepreneurial skills and practices, including calculated risk-taking, long-term orientation and strategy, and teamwork. They should also be connected to performance, where applicable, so such benefits as bonus plans, profit sharing, and stock options are model possibilities for improving performance (Pfeffer, 1994). At the same time, companies need to maintain a flexible approach toward offering benefits to their employees to reinforce the flexibility needed in an entrepreneurial firm.

This means that alternative benefits, like flex-time or telecommuting, which offer employees the option of participation at their discretion, are ideal. In addition, training has been shown to have a positive impact on performance (Gowen and Talon, 2003; Huang, 2001; Huselid, 1995). While Schuler is one of the foundational authors on the importance of benefits to firm performance, other authors are pushing for further examination of this topic (See, for example, Heneman, Tansky, and Camp, 2000). Other researchers have instead focused on highly related topics. For example, Stevens and Hill (2001) looked at executive benefits across large firms. The size of the firm aside, Stevens and Hill found that executives’ at the most successful companies tend to have lower fixed salaries than their counterparts in lower performing firms, but they also have a larger portion of the pay come from incentive pay. By using incentive pay like cash incentives and perks, firms were able to provide their employees with a higher level of autonomy and motivation to succeed.

The work of Gomez-Mejia, Tosi, and Hinken (1987) discussed similar reasoning in family businesses, although such firms are less likely to dilute their family’s control through employee ownership (Hayward, 1990). Interestingly, the keeping ownership of the firm in the family has a positive impact on family member’s performance, so long as the members are actually given some portion of the ownership.

Methodology

Sample and Procedures

This study draws from two data sets: one containing data on entrepreneur values and the other containing data on compensation practices and firm performance. To gather data for compensation practices and firm performance, we partnered with Entrepreneur Magazine, using their in-house expertise for gathering performance data and other relevant internal information for each of the 500 fastest growing firms in the United States. Entrepreneur magazine calculated the ranking for each firm based on a combination of factors, including the percent sales growth, growth in number of employees, and other considerations. In order for Entrepreneur Magazine to consider a business one of the fastest growing entrepreneurial firms in the United States for 2007, a business had to be started between 1998 and 2002. The reason for choosing 500 fastest growing firms is because we thought that this sample would likely provide better compensation packages with employees than other firms thereby allowing us more chances to find the significant relationship among entrepreneur values, compensation practices, and firm performance. If the relationships are not captured in the sample of successful entrepreneurial firm, it would be much less likely for us to expect to see those relationships in less successful firms with slow growth. Compensation data was obtained through direct contact with the firms, while performance data were gathered from publicly available records. Upon receipt of the spreadsheet, we pulled a subset of the 500 firms and verified the accuracy of the information to ensure the validity of the data. Using this database, value surveys were sent to the 933 founders of the 500 fastest growing firms in the United States. Finally, we received 134 responses (14.1%), of which 14 were not usable due to incomplete data. However, these responses represent 111 unique firms of the top 500 (22.2%). Each value survey response was paired with compensation practice and performance data supplied by Entrepreneur Magazine to create a master dataset.

Emotional Intelligence

We asked respondents to look at two components of emotional intelligence. We used a nine-item measure for self-awareness and a twenty one-item for measuring self-management. Each of these items provided a statement assessing some component with an associated five-point Likert scale. For scoring, 1 meant low agreement with the statement and 5 was complete agreement. The scores for the nine self-awareness items were averaged together, creating a composite self-awareness variable. We used the same procedure for the twenty-one self-management items. The mean value of self-awareness was 4.04, with a standard deviation of 0.622 and a Cronbach's α of 0.860. For self-management, the mean was 4.101, standard deviation of 0.515, and a Cronbach's α of 0.919.

Compensation practices

Data on compensation practices from Entrepreneur Magazine included health insurance, life insurance, retirement plans, stock options, company car, tuition reimbursement, telecommuting, and flextime and they were coded as a dichotomous variable (0=not present, 1=present). In addition, companies were allowed to mention any other benefits they offer. Following the procedures outlined by Delery and Doty (1996), we created the compensation practice index by simply adding the number of benefits and perks offered by the company. This additive approach is appropriate because aggregating compensation practices assumes that firms can improve performance by increasing the number of practices (Youndt et al., 1996). Therefore, more is better with respect to the impact on performance because of the overlapping and

mutually reinforcing effect of multiple practices (MacDuffie, 1995). Note that the additive approach only weakens the net effect of the compensation practices in the absence of a practice (MacDuffie, 1995) while multiplicative approach reduces the index value to zero if a single compensation practice is absent. Furthermore, as there is no evidence regarding a differential impact of various compensation packages on firm performance, we assigned equal weighting to each practice. This index was used as a proxy for the extent of benefits offered, an underlying continuous scale, which in turn allows the use of regression methodology.

Control Variables

We included four control variables based on the entrepreneurs: the gender of the entrepreneur (coded male=0 and female=1, mean 0.12, standard deviation 0.33), age of the entrepreneur (mean 47.43, standard deviation 8.99), the number of businesses previously started by the entrepreneur (mean 3.05, standard deviation 4.06), and whether the current business was started with partners (coded no=0 yes=1, mean 0.65, standard deviation 0.48). All information was as of December 2007. The number of previous start-ups allows us to account for accumulated venture experience by entrepreneurs. We controlled for having partners as entrepreneurs starting a business with others would presumably have greater focus on the welfare others, especially if those others are founding partners. Such other-focus could result in offering greater benefits, despite the costs.

Analysis

We used ANOVA regressions to analyze the data. Table 1 summarizes the results of the models.

Table 1: Effect of Emotional Intelligence on Extent of Benefits Offered

Variables	Model 1	Model 2
Constant	8.460 (0.000)	6.428 (0.003)
Female	0.145 (0.790)	0.263 (0.611)
Age	-0.043* (0.032)	-0.043* (0.022)
Number of businesses started	0.000 (1.000)	-0.005 (0.899)
Started business with partners	0.952* (0.011)	0.758* (0.032)
Self-awareness	0.311 (0.484)	0.008 (0.988)
Self-management	-0.941** (0.080)	-0.218 (0.746)
Number of employees 2006		0.031 (0.138)
Interaction term: Number employees x Self-awareness		0.004 (0.424)
Interaction term: Number employees x Self-management		-0.010*** (0.054)

* $p < 0.05$ ** $p < 0.05$, one-tailed test *** $p < 0.010$

In Model 1, we examined whether a relationship between emotional intelligence and the extent of benefits offered exists. We found that of the two emotional intelligence components, only self-management was significantly related. The negative coefficient is consistent with our hypothesis. Other interesting results were the significant effect of age and having started the business with partners on the extent of benefits offered. Older entrepreneurs offered fewer benefits, potentially due to experience working with other people providing them greater insight into how to motivate people without resorting to alternative compensation practices. The strong positive coefficient for starting a business with partners matches our expected results.

For model 2, we expanded the model, incorporating the potential moderating effect of the firm size—number of employees in 2006. We included two interaction terms to allow firm size to moderate the relationships between both self-awareness and self-management on the extent of benefits offered. The results for the control variables (significant positive relationship for starting the business with partners, significant negative relationship for the age of the entrepreneur) were consistent in both models. The main difference is that the explanatory power of the self-management variable disappeared; instead, the interaction term of firm size and self-management assumed that power. Thus, as the firm size increases, the stronger the negative impact of high self-management emotional intelligence on the extent of benefits offered.

Discussion

The results of our analysis point to several interesting conclusions about top performing entrepreneurs. The first is that such entrepreneurs' self-management appears to create a more desirable environment for employees. In essence, an entrepreneur high in self-management is better able to control him- or herself when dealing with the numerous pressures faced by such rapid growing businesses. Employees appreciate this control, recognizing it as a rare commodity, and the work environment is likely much more enjoyable. Self-awareness, on the other hand, does not translate into anything other than being aware of one's emotions. While acknowledging anger, elation, and other emotions experienced during the start up phase of a business is essential to a healthy mental state for the entrepreneur, such awareness does not translate into any direct benefits to the employees. As a result, only self-management showed any significant relationship to the extent of benefits offered.

However, our hypothesis regarding the size of the firm moderating the relationship proved only partially true. Self-awareness of emotions among entrepreneurs does not matter, whether the firm is small or large. Self-management of one's emotional state, on the other hand, is strongly connected to the firm size. Specifically, the larger the firm, the more important it is to manage one's emotions. In smaller firms, the entrepreneur has greater interaction with employees, allowing them to better understand the quirks and discuss the emotions the entrepreneur has. With few people in the organization, the employees may feel like the firm is more like a family and be more accepting of shortcomings in their leader, much as people often do for a mother or father. In larger organizations, however, such in depth connections with the entrepreneur are not possible, and an emotional outburst, either positive or negative, may result in lost confidence in the capabilities of the leader. Employees who witness the entrepreneur angrily yelling about a problem with the supplier may feel that the entrepreneur will do the same for any transgression or error, even if the event in question was an isolated incident. Without being able to connect with the entrepreneur on a personal level, the employees will extrapolate

the attitudes of the entrepreneur from those rare times of contact. Also, the perceived attractiveness of the work environment will flow from the perceptions of the leader, making those extrapolations that much more significant.

Limitations and Future Research

This study looked at the emotional intelligence of top performing entrepreneurs. While this is an unexplored area of the entrepreneurship field, one of the limitations is the limited applicability of such research to all entrepreneurs. Only by situating this study with others looking at entrepreneurs overall can we derive conclusions that will provide entrepreneurs the necessary guidance on which aspect or aspects of emotional intelligence will best benefit entrepreneurs. Entrepreneurs in slow growth or struggling businesses, for example, may need greater self-management, providing a role-model of stability for co-workers and debtors alike. Alternatively, such firms may benefit more from low self-management, as others become inspired by the passion and involvement the entrepreneur has in his or her business.

Another area for improvement is the response rate. Although we had representation from 23.5% of all businesses still in existence at the time of our survey (several having been sold), only 117 (12.3%) of all 951 originally eligible entrepreneurs responded with enough data for analysis, not counting 17 more who responded with incomplete data. This limited response rate is partially due to the delay in sending out the surveys; although the top 500 firms were officially recognized in January 2008, the first round of the surveys were sent in July due to logistical concerns. When we next conduct the survey, we intend to send the surveys much earlier. In addition, we will look at the survey design to ensure that the length of the survey is not so long that entrepreneurs are disinclined to answer the questions.

Third, our statistic for measuring the benefits offered was quite limited. Due to the data we were able to gather from each firm, the only information we had was the presence or lack of any given benefit. However, we did not have the degree to which any of these benefits were offered. Neither did we have information on other forms of compensation, including wages, mentoring programs, training resources, or quality facilities and resources for employees to use at work. As such, the effects measured may actually be understated. In follow-up studies, we would like to explore the actual extent of benefits offered in greater detail, allowing us to use a more nuanced metric for the analysis.

Conclusions

This study has two main implications. The first is guidance for high performing firms seeking to reduce their costs, and consultants to such firms. As we determined, self-management on the part of the entrepreneur is a way to reduce the costs to the firm. Benefits are a costly component of any firm's overhead, and being able to reduce the number of benefits offered by focusing on emotion management is a low-cost solution with great return.

The second implication is to the field of entrepreneurship. Looking at highly successful firms can lead to discovering practices that may help other entrepreneurial firms achieve greater success than practices developed by studying all entrepreneurial ventures. Similarly, looking at the entrepreneurs of these firms may lead to behaviors and mentalities other entrepreneurs need to develop their firms beyond being lifestyle firms and transform them into truly growth-oriented ventures. However, such discoveries and conclusions will require much more in-depth research, of which this study is only the beginning.

References

- Bar-On, R. (1985). *The development of an operational concept of psychological wellbeing*. Unpublished doctoral dissertation, Rhodes University, South Africa.
- Bartel, A. P. and Lichtenberg, F. R. (1987). The Comparative Advantage of Educated Workers in Implementing New Technology. *The Review of Economics and Statistics*. 69(1): 1-11.
- Bartel, A. P. and Lichtenberg, F. R. (1990). The Impact of Age of Technology on Employee Wages. *Economics of Innovation and New Technology*. 1: 1-17.
- Bray, D. W., Campbell, R. J., & Grant, D. L. (1974). *Formative years in business*. New York: Wiley-Interscience.
- Boyatzis, R. E. (1982). *The competent manager: A model for effective performance*. NY: John
- Boyatzis, R.E., & Goleman, D. (2006). *Emotional and Social Competency Inventory*. Boston: The Hay Group.
- Boyatzis, R. E., Goleman, D., & Rhee, K. S. (2000). Clustering competence in emotional intelligence: Insights from the Emotional Competence Inventory. In R. Bar-On, & J. Parker (Eds.), *The Handbook of Emotional Intelligence: Theory, development, assessment, and application at home, school, and in the workplace* (pp. 343-362). San Francisco: Jossey-Bass.
- Carmeli, A. (2003). The relationship between emotional intelligence and work attitudes, behavior and outcomes. *Journal of Managerial Psychology*, 18 (8), 788-813.
- Cherniss, C. (2000). Social and emotional competence in the workplace. In R. Bar-On, & J. Parker (Eds.), *The Handbook of Emotional Intelligence: Theory, development, assessment, and application at home, school, and in the workplace* (pp. 433-458). San Francisco: Jossey-Bass.
- Carlson, D. S., Upton, N., and Seaman, S. (2006). The Impact of Human Resource Practices and Compensation Design on Performance: An Analysis of Family-Owned SMEs. *Journal of Small Business Management*. 44(4): 531-543.
- Delery, J., & Doty, D. H. (1996). Modes of theorizing in strategic human resource management: Tests of universalistic, contingency, and configurational performance predictions. *Academy of Management Journal*, 39, 802-835.
- Fisher, C. D. (2000). Mood and emotions while working: Missing pieces of job satisfaction? *Journal of Organizational Behavior*, 21, 185-202.
- Fox, S., & Spector, P. E. (2000). Relations of emotional intelligence, practical intelligence, general intelligence, and trait affectivity with interview outcomes: it's not all just 'G'. *Journal of Organizational Behavior*, 21: 203-220.
- Gardner, H. (1983). *Frames of Mind: The Theory of Multiple Intelligences*. New York, NY: Basic Books.
- Gomez-Mejia, L., Tosi, H., and Hinken, T. (1987). Managerial Control, Performance, and Executive Compensation. *Academy of Management Journal*. 30:51-70.
- Gowen, C. and Tallon, W. J. (2003). Enhancing Supply Chain Practices through Human Resource Management. *The Journal of Management Development*. 22(1): 32-45.
- Gundlach, M. J., Martinko, M. J., & Douglas, S. C. (2003). Emotional intelligence, causal reasoning, and the self-efficacy development process. *International Journal of Organizational Analysis*, 11 (3), 229-246.
- Hayward, S. (1990). *Managing the Family Business in the United Kingdom*. London

- Heneman, R. L., Tansky, J. W. and Camp, S. M. (2000). Human Resource Management Practices in Small and Medium-Sized Enterprises: Unanswered Questions and Future Research. *Entrepreneurship Theory and Practice*. 25: 1-11.
- Higgs, M., & Aitken, P. (2003). An exploration of the relationship between emotional intelligence and leadership potential. *Journal of Managerial Psychology*, 18 (8), 8 14-823.
- Huang, T. C. (2001). The Relation of Training Practices and Organizational Performance in Small and Medium Size Enterprises. *Education and Training*. 43(8): 437-452.
- Huselid, M. A. (1995). The Impact of Human Resource Management Practices on Turnover, Productivity, and Corporate Financial Performance. *Academy of Management Journal*. 3: 635-672.
- Kotter, J.P. (1982). *The general managers*. NY: Free Press.
- Link, A. N. and Siegel, D. S. (2007). *Innovation, Entrepreneurship, and Technological Change*. Oxford: Oxford University Press.
- Luthans, F., Hodgetts, R. M., & Rosenkrantz, S. A. (1988). *Real managers*. Cambridge, MA: Ballinger Press.
- MacDuffie, J. P. (1995). Human resource bundles and manufacturing performance: Organizational logic and flexible production systems in the world auto industry. *Industrial and Labor Relations Review*, 48, 197-221.
- Mayer, J. D., & Caruso, D. R. (2002, November/December). The effective leader: Understanding and applying emotional intelligence. *Ivey Business Journal Online*, pp. 1.
- McClelland, D. C. (1973). Testing for competency rather than for intelligence. *American Psychologist*, 28, 1-14.
- McClelland, D. C., Baldwin, A. L., Bronfenbrenner, U., & Strodbeck, F. L. (1958). *Talent and society: New perspectives in the identification of talent*. Princeton: D. Van Nostrand.
- Pfeffer, J. (1994). *Competitive Advantage through People*. Boston, MA: Harvard Business School.
- Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition & Personality*, 9 (3), 185-211.
- Seals, C., Boyatzis, R and Baily, J (2009). Fostering Emotional and Social Intelligence in Organizations. *Linking Theory& Practice, EAM White Paper series, Organization management Journal* 3 (3) 190-209
- Schuler, R. S. (1986). Fostering and Facilitating Entrepreneurship in Organizations: Implications for Organization Structure and Human Resource Management Practices. *Human Resource Management*. 25(4): 607-629.
- Shrader, R. and Siegel, D. S. (2007). Assessing the Relationship between Human Capital and Firm Performance: Evidence from Technology-Based New Ventures. *Entrepreneurship Theory and Practice*. 31(6): 893-908.
- Siegel, D. S., Waldman, D. A., and Youngdahl, W. E. (1997). The Adoption of Advanced Manufacturing Technologies: Human Resource Management Implications. *IEEE Transactions on Engineering Management*. 44: 288-298.
- Spencer, L. M. Jr., & Spencer, S. M. (1993). *Competence at work: Models for superior performance*. New York: John Wiley & Sons.
- Stevens, P. and Hill, T. (2001). Structuring Compensation to Achieve Better Financial Results. *Strategic Finance*. 82(9): 48-53
- Sternberg, R. J. (1985). *Beyond IQ: A triarchic theory of human intelligence*. New York: Cambridge University Press.

Thorndike, E. L. (1920). Intelligence and its uses. *Harper Magazine*, 140, 227-235. Thornton, G. C. III, & Byham, W.C. (1982). *Assessment centers and managerial performance*. New York: Academic Press.

Youndt, M. A., Snell, S. A., Dean, J. W. J., & Lepak, D. P. (1996). Human resource management, manufacturing strategy, and firm performance. *Academy of Management Journal*, 39, 836-866.

**The silent and shameful suffering of bosses:
Layoffs in SME**

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Specialists in the field of workplace suffering ignore the suffering felt by employers as it departs from their theoretical preconception that suffering is based solely on domination. The employer is dominant and is thus unable to experience suffering. Worse still, common wisdom has it that it is often employers who cause the suffering of others, notably their employees. Specialists in workplace suffering thus ignore the suffering of employers and, in parallel, employers themselves rarely admit to experiencing suffering, perhaps because they esteem that their role prevents them from being burdened by such qualms. Admitting that they are suffering would be seen as a sign of weakness: an employer is strong, and must show it. This very real suffering thus remains unspoken and unheard.

Yet every day there are employers with health problems brought on by the stress of competition or the requirements of their contractors, who are becoming increasingly demanding.

Of all the decisions that the managers of SME have to make, that of laying off someone is the most difficult as well as the hardest to live with. Layoffs are often seen as a personal failure with mental and psychological consequences that can be disastrous for both the person laid off and the employer responsible. Curiously, the suffering experienced by the employer is never mentioned in the SME context. The works in human resources management that deal with layoffs tend to focus on the employees laid off and on employees who escape layoff. There are also studies of the “blues” felt by HRM (human resources managers) when they have to implement a downsizing policy. But few studies on SME (not to say none at all) take any interest in the psychological impact this decision has from the point of view of the employer, the SME owner.

This paper has two aims. First, we will try to explain the reason why there are so few studies on this subject. It may indeed seem rather curious, or even incredible, that after more than 50 years of research into SME within the ICSB, with almost forty journals specialising in business management and SME, analysis of this phenomenon should be so disregarded and neglected. Secondly, we will show to what extent proximity, for us the founding principle of SME management (Torrès, 2004-a; 2004-b), is a characteristic that amplifies feelings of suffering in a layoff context. We will also evoke the fundamental difference with large companies, in which layoffs are made in the context of the division of tasks which allow the decision-makers to protect themselves.

1. The lack of research into the suffering of employers in SME: towards an explanation

Why has this subject never been covered in research? All researchers know that it is surprising when a subject has never been covered in research, but in this case the surprise is that much greater given that laying people off is almost certainly the hardest decision to make and the hardest to live with for the owner of an SME. How can it be that until now, no one (to our knowledge) has had the idea of investigating this question?

There are two research communities that should have been interested in this question. The first is the community that focuses on Human Resources Management. In this field, there are many studies on the subject of layoff. If we look at those that focus more specifically on the suffering, or even traumatic, aspect of layoff, two main areas are covered.

The first area is the trauma experienced by the employees laid off. Research shows that these employees suffer not just from the loss of their job, and thus the loss of their salary, but also from their loss of status. In certain cases, being laid off is the first stage in a descent into hell where the employee who loses his job subsequently loses his wife, his family and his home. This type of spiral is all too real and many researchers use the term “victim” (Brockner *et al.*, 1994; Skarlicki *et al.*, 1998). Similarly, many works insist on the feelings of trauma experienced by those who escape downsizing policies. This is what American authors refer to as the survivor theory (Brockner *et al.*, 1992; Noer, 1993 ; Brockner *et al.*, 1994; Fabre, 1997; Armstrong-Stassen, 2004). This theory shows that employees who remain with a company also suffer from guilt complexes (“why him and not me?”). Like survivors of accidents, employees can experience considerable suffering following the layoff of a colleague (Hugues, 2000). Other works show that efficacy and motivation at work tend to decline following layoffs.

The second area evoked in HR literature is the *blues* felt by the HRM, the person most often considered to be responsible for implementing the layoff decision. These studies are the closest to the subject of our research (the suffering experienced by employers). Some articles (Clair *et al.*, 2006) and books (Pivert, 2004; Courpasson, 2006; Palpacuer *et al.*, 2007) provide accounts of the profound distress sometimes felt by certain HRM when confronted with layoff policies. But these works have one serious limitation with regard to our viewpoint. HRM are rarely those who make the decisions. At most, they participate collectively in the decision-making process when they are allowed to sit on the group’s Board of Directors or Executive Board. They are never, however, entirely responsible for the decision. This is a key difference with SME. In SME, it is generally the owner himself who both makes the decision and implements it. This, in our opinion, is a specificity that deserves another approach and which justifies analysis of the suffering felt by the person laying someone off, when this person is the owner of an SME.

Under these conditions, another research community could have taken an interest in this question. This is the community specialising precisely in research into SME. There are many SME-based journals, and several research networks (ICSB, ECSB, AIREPME...) (Torrès, 2007). If we take the example of the review of doctoral theses presented in France in the period 1975-2006, we have been able to identify only 26 theses with the field of HRM as their subject out of a total of 383. But of these 26 theses, the question of layoff is not mentioned once, or at least not in the title. As the purpose of a title is to inform the reader of the main subject of the doctoral research, this means that at best the question of layoff is mentioned only in a secondary and/or indirect manner. This gives rise to two remarks: on the one hand, theses alone do not make it possible to establish a review of the literature on a given subject. It is necessary to extend the research to journals. Secondly, this lack concerns only France. It is thus necessary to extend the research to work from other countries. Nevertheless, despite these two limitations, we remain greatly surprised by the total absence on this subject, given the considerable mass of theses presented (383 in thirty years). Another interesting source is the RIPME. This journal dates back to 1988. Once again, we observe a total lack of articles on the subject of layoff. This fact is more disturbing than the first for two reasons: first, the RIPME has a resolutely international readership. Despite being written in French, this review published by the Université de Québec à Trois Rivières has always been capable

of considerable internationality. This aspect thus makes it possible to observe that the lack of work focusing on layoff is not particular to the French scientific community. The second is that journals publish articles by young yet confirmed researchers. This means that this aspect is also ignored by experienced researchers, which is even more surprising.

In the end, the HRM community does take an interest in layoffs, but rarely in the context of SME¹ and the community specialising in studying SME obviously takes an interest in SME but rarely studies the question of layoffs. It is this intersection that justifies our research aim and our surprise in equal measure. How has the SMEist community been able to develop over so many decades without evoking this essential question of employer suffering during layoff policies in SME? Could it be because of the psychologising nature of the concept of suffering? Is this perhaps the most valid explanation, given that it is true that the work done on SME is essentially anchored in the fields of management and economic science? The summary of the doctoral theses presented in France shows that of the 383 theses, 233 were presented in management and 90 in economics. Psychology enters into only 5 theses, which corresponds to barely more than 1% of all theses. Veciana (2008) shows that the importance of psychology in research into Entrepreneurship/SME developed within the ECSB (European Council for Small Business) has declined considerably and now corresponds to only 3% of all current approaches. The SMEist community has few ties with psychological issues and has thus never approached this question. “Although the question of domination and suffering is a key aspect in human sciences, within the field of management we are obliged to note that it has often been pushed to the periphery, if not totally removed, in favour of more harmonious conceptions of interests and highly functional visions of power. From a historical point of view, it is essentially researchers from outside the world of management who have focused on this type of issue” (Chanlat, 1999 : 52).

The question of suffering in SME nevertheless remains essential. Many conferences within the business owner community have taught me that laying someone off is the single most difficult decision for the owner of an SME to make². Obviously, it is often difficult for an employer to innovate, open up at the international level, hire new employees, borrow money, invest in new machinery and so on. But none of these issues imply the same emotional impact as the decision to make layoffs. A layoff is the equivalent of a broken link. In SME, interpersonal links are much stronger than in large companies for reasons associated with the proximity of those involved. In SME, people see each other more often than in large companies. People work together, often on a daily basis, whilst in large companies, even if the same types of link can be found within a single department or factory, the reasoning is that of the group as a whole. Most employees do not see each other and do not even know each other. The degree of intimacy of their human relations is not the same. And this is precisely why these aspects make all the difference.

2. Proximity as a factor that amplifies the suffering of an employer in times of layoff.

In order to understand how SME function, it is necessary to abandon the agentic-state in which SME are based on the agency theory or the agentic-state described by Stanley Milgram. Although the agentic-state model corresponds to large companies, where there are strong divisions of work, it is considerably less valid in SME.

The owner of an SME who makes the decision to make layoffs cannot use the “it’s not my fault” discourse. It is precisely in SME that the principle of responsibility is total, and

¹ With the notable exception of Claude Fabre (1993; 1994) in France.

² It should be noted that bankruptcy is nevertheless even more cruel.

wholly assumed by a single person: the director-owner. The lack of dissociation between the function of owner and that of director is what gives SME their particularity. It also gives the decision to make layoffs a much more personal, and, as a result, much more traumatic, aspect. Directors of SME cannot hide behind disempowering arguments. Of course, they can always, and often do, invoke their impotence with regard to a given economic climate, but what they cannot do is say or insinuate that the decision to make layoffs comes from someone else.

In the context of large companies or groups, the justification process is completely different, and it is this difference that, in our opinion, is the real basis for the true nature of SME in relation to large companies. In two interviews with layoff decision-makers, Isabelle Pivert (2004) highlights the layoff management mechanism. Here, we retrace several comments that show how the degree of proximity modifies the perceptions and practices of layoffs: in one of these comments, the layoff decision-maker shows clearly that the way of approaching the question is different depending on whether there is proximity or distance in relation to the person being laid off: “The closer we are to the work in the field, the more we have to act in an operational manner. When we remain at a certain distance, the dimensions and implications are not the same. That is, when we are at the head office and have to work on a layoff plan that concerns decentralised factories, we have distance and we can act much more dogmatically. It is not the same when you are working in the field and you have, right in front of you, both employee representatives and the employees themselves or the local administrations, that is, all the people involved in a layoff policy” (Pivert, 2004: 29). Proximity, which is here taken in terms of face-to-face contact, seems to be much more painful than distance. If the group’s strategy is justified, it is nevertheless difficult to transpose it into actions, particularly when you are familiar with the people concerned. “The most difficult thing is the human aspect. This is a factory where I have become very involved with the employees. It is in the country, I know all the people, they are my neighbours, people from the same village as me... it is the whole human dimension. And it is difficult to tell yourself that by applying the criteria for choice in layoffs, it will be so-and-so who has to go because there will inevitably be a time when the decision we have to make becomes completely personalised, even if it is collective...” (Pivert, 2004 : 33). Yet the most basic of life skills is the ability to face reality, that is, to meet physically with the people who are being laid off. Those who have laid people off almost always describe this moment as painful: “The decision made with the director of the factory was that I should see each person we were intending to lay off. The idea was that we did not want the foreman or the shop foreman to be the one who broke the news. This was a choice that we made in relation to the people involved. It was more honorable that the person facing them, the one breaking the news, its consequences and its context, be someone who had been involved in the decision-making process. What we wanted to avoid at all costs was a situation in which someone told them, “OK, so I have to tell you you are going to be laid off, but you have to understand, it is not my decision, it comes from the bosses”. We really wanted them to have the chance to meet – even if we were not totally responsible for the decision-making process as the layoff plan was imposed on us – with those who were closest to them in the factory, who had been involved in the decision-making process and who would be following through with the layoff plan until its conclusion” (Pivert, 2004 : 36).

This comment reveals the whole ambivalence of the layoff process in large companies. On the one hand, the person who lays others off seems to take responsibility for the decision in association with the directors, by refusing that the foremen or shop foremen (the proximity managers) be those who deal with the process. This process makes provision for a meeting with someone “who participated in the decision” so as to avoid any type of evasive technique.

The person making the layoff decision says that his aim is to avoid situations where someone says, "I have to break the news of your layoff to you, but it wasn't my decision, it was the big bosses". Yet, just a few phrases later, this same person recognises that he was not "really responsible for the decision-making process" himself. The fact is that even if we are willing to accept responsibility for the decision-making, this acceptance is never more than partial. And it is this partial nature that eases one's conscience and makes it possible to face up to harsh reality. If we draw analogies with the military sphere, it could be said that those who lay people off are like the members of a firing squad who know that they are going to kill someone but who also know that the decision that caused the situation in which they find themselves is not of their making. Better (or worse) still, they also know, because it is a common practice found in armies all over the world, that certain members of the squad have blanks in their rifles without anyone knowing who has real bullets and who has blanks. That blank bullet eases the conscience of the poor soldier enlisted in the firing squad.

None of these mechanisms (evasion, circumvention...) can be used in the case of SME. The person who manages the layoff programme is also the decision-maker. "Management of employment (hiring, promotions, layoffs) is a priority matter for HRM, regardless of the size of the SME" (Mahé de Boislandelle, 1988). This type of management is in most cases the responsibility of the owner himself, who has, on principle, rather centralised decision-making powers in this field (Fabre, 1994 : 151). In SME, it is generally the owner, and the owner alone, who makes this decision. We can thus understand, at that moment and in that situation, the full burden on the decision-maker and its corollary, his isolation and solitude. For sure, it can be imagined that there is a learning curve. The first layoff decision is apparently the one that is the most disturbing. With experience, we can imagine that owners develop a certain familiarity. Although this familiarity is quite real, it is nevertheless not an antidote to the suffering caused by having to lay off someone close. And this is precisely the theory that we are putting forward (Torrès, 2004-a;2004-b): everyone is close to everyone in SME. In other words, the smaller the company, the more common the ties between the members of the company, and thus the stronger. It is when such a tie is broken that there is trauma on both sides. Or, whether you are the person laid off or the person who made the layoff decision, dealing with layoff in SME is in all cases more traumatic for both parties. The feeling of betrayal may be stronger. Employees are never really surprised when their factory is sold to another industrialist in the context of a multinational takeover. But when an owner sells his company to another owner, the employees often have feelings of abandonment and thus betrayal. Several SME owners have told us that they cut all ties with their former employees once the company had been sold to someone else. This phenomenon is even more obvious (and unsurprising) in cases where the relationships were very good. And it is precisely because the relationships were good that the feeling of betrayal is stronger.

Proximity between those involved thus makes layoff management more traumatic than in large companies. Although the trauma theory for those laid off is common (almost all the literature in HRM on this subject is from this point of view), on the contrary the trauma suffered by the one who lays people off has never (to our knowledge, at least) been covered. This aspect nevertheless seems to us to be a particularly useful avenue for research, at several levels. In human terms, it would be a shame to let it be believed that the decision-makers for layoffs are people incapable of feeling any type of symbolic or psychological suffering. It is essential that we take leave of the executioner/victim metaphor, or, if not, that we at least consider that the executioner is nevertheless a living and breathing human being, full of feelings, emotions, remorse and regret.

It is absolutely not our intention to suggest that there is no suffering involved in layoff decisions in large companies. Both of the comments made to Pivert (2004) are highly eloquent on this subject. One of the layoff managers stated that, “the hardest part is the actual departure of the person, when the facts are announced” (Pivert, 2004: 79). The second comment is even clearer. In response to the question, “Humanly speaking, how does it feel the very first time?”, the answer is crystal clear: “For me, it is simple: I spent night after night going through the list of people in my mind. I could not sleep. It was a terrible experience...”. But unlike the owner, whose role is to develop his company in every respect, the role of the HRM is more limited and circumscribed. In the context of layoff, “the role of the HRM is effectively to respond to the requirements of the company that have led to this need to suppress jobs, but it is also to respond to the needs of the people concerned, their expectations, their worries, by searching for everything possible to help them reclassify themselves, everything that may help them materially and psychologically to get through the difficult moment” (Pivert, 2004: 43). In other words, although layoff is an inhabitual management situation for a company owner (at least this is what we hope), it can become a somewhat common task for the HRM in a large group. And this, to such an extent that groups use space to do the “dirty deeds”. Palpacuer *et al.* (2007) evokes a mechanism that is particular to large companies: “Today in businesses, there is management of the managers (top managers) but there is no longer management of the executive managers. So yes, the management of the top managers is very well done. Much thought is given to where they should go. A director for X that goes abroad will certainly have a brilliant career when he comes back to France (...). The same is true for directors who arrive in satellite companies. When they arrive, everyone says, OK, this guy will be here for a couple of years, he will do some spring cleaning and then he will be gone. But they know that behind this, they have no need to worry about him. In other words, he has been sent there to get rid of people and will then move on to his next place” (Palpacuer *et al.*, 2007: 187). Finally, let us take the account made by a HR executive who was sent by a group to Toulouse to put into action a layoff plan. As he knew no one, he did his job to the best of his ability until he could take it no longer (his nickname was “the cleaner”) and sent in his resignation after six months. It has to be said that by that time, the employees were no longer unknown to him. The group’s reaction was to refuse to accept his resignation and instead transfer him somewhere else. Another place, another custom! By making use of localisation tactics for executive layoff managers, groups can use geographical space to play a decisive role in the implementation of layoff policies³.

In the same register, the owner of an SME has confessed to me that he was unable to find the strength to tell his secretary that she was being laid off. He took advantage of her annual holiday leave to send her a letter informing her of the news. We are not here to analyse this act at the moral level. We will simply show that this was a trick to avoid an unpleasant face-to-face encounter. Once again, space, proximity and distancing can be used to explain these situations. Another account tells the story of a secretary that two associate managers wanted to lay off. In order to make the act psycho-compatible with their own consciences, they looked for a job for her and found one at the general council. The secretary, however, refused the job. It was then that the managers asked one of their colleagues to lay off the secretary because the colleague did not know her as well as the other two. In this case, it was resorting to a third party that made the layoff process easier.

Let us now risk a metaphor that is well known in military circles: it is always more traumatic to kill someone with blade than with a rifle. The fundamental difference lies

³ This example alone shows how geographical space can be used as a resource for a company. It is quite rare for the “resource based” theory to take the spatial variable into account when analysing a company’s resources.

precisely in the degree of proximity between the victim and his executioner. In the case of a rifle, the target is a certain distance away. It is probably not possible to hear the victim's voice. If you stand back a little, the victim's face is probably not very clear and he becomes more or less anonymous... In the case of a blade, contact is necessary. You must touch your victim, surround him, listen to him, sense him... and in the end you see the face of the person you have killed! This makes all the difference because it is precisely the victim's face that will ceaselessly haunt the nights of his killer. Soldiers have known this for a long, long time⁴. Killing someone with a blade during hand-to-hand combat is the most difficult and the most traumatising act. If we look at the work by Stanley Milgram (1974) on obedience to authority, the author clearly showed that the degree of physical proximity between the victim and the participant played a considerable part in the participant's ability to obey the orders given by the experimenter. The closer the participant was to the victim, the stronger the probability that he would refuse to inject the electricity. By varying the number of senses called upon (physical contact, sight, hearing,...), Milgram showed that the degree of consciousness of the

⁴ Konrad Lorenz shows the importance of the dehumanising process with regard to the enemy in times of war. In order to make elimination of the enemy easier, all armies tend to assimilate the enemy with animals as, psychologically, this makes physical acts of elimination easier. Continuing in the same vein, Pierre André Julien, during a discussion in Halifax (Canada) at the 53rd International Council for Small Business (ICSB), remarked to me that it is often considered that the most terrible wars are civil wars as it is in such wars that brothers are pitted against brothers and fathers against sons. Can we not here notice once again that it is the proximity between those fighting that seems to make civil wars so hard to accept? Similarly, we should also highlight the spatial consequences of technological progress in weaponry. What remains constant is the search for weapons of increasingly long range. From primitive handheld weaponry for cavemen, to spears, the bows and arrows, then the catapult, rifles, canons, and finally missiles, with, as the climax, inter-continental missiles (the famous "star wars" programme). The French sociologist, Georges Friedmann, in his analysis of the industrial society made a remark along similar lines: "Man was present in war, he could see his enemy, fought with him man-to-man, shot arrows at him, threw things at him from a limited distance. Fighting brings into play different trends, different psychomotor functions in modern wars where the individual, enclosed in machines either on or in the ground, in or on the water, in the air, must often fight from a great distance, against largely invisible enemies (or visible, or audible, only with the help of sophisticated equipment): trenches, tunnels, mines, long-range canons, long-distance explosions or time bombs, high altitude bombing, submarines and torpedos, atom bombs, and so on. As the technical war moves ever closer to total war, it has gone increasingly beyond the presence and the dimensions of man" (Friedmann G, p.35-36, 1966). Today, a considerable amount of military research is even concentrated on drones (aeroplanes with no pilot). On this subject, Laurent Zecchini wrote in the newspaper *Le Monde* (2008: 23) : "Such technological prowess is not everything: the fact of being able to control a Predator over Iraq or Afghanistan from a launch site on the ground situated in Nevada is not without consequence for the evolution of warfare. 'Emotional distancing from the battle field certainly implies less stress for the pilot, but also perhaps less restraint in the use of violence,' esteems Michel Asencio, a researcher at the Foundation for Strategic Research. He also observes that 'the video game culture makes the executives and future decision-makers familiar with the dehumanisation of war'. What will the future bring, when the enemy can no longer be seen except by using electronic sensors, that is, without being able to perceive the 'fog of war' so dear to Clausewitz?"

In his masterful analysis of aggression, Lorenz (1974) defends the idea that the appearance of weapons in the animal kingdom goes hand in hand with inhibited behaviour: "Why are dogs inhibited from biting the throat, or crows from pecking a friend's eye, and why is the wood pigeon not protected against dastardly crimes? We cannot give this question an answer of real causality. It would certainly be a historical explanation of the past during which these inhibitions were phylogenetically formed, as the dangerous weapons of the hunting animals developed" (Lorenz, 1974: 150). Hence the fundamental point that Lorenz makes: Man has one specificity: he has invented weapons that are not part of his own body. And from this specificity, he has deduced another characteristic: the absence of the inhibition factor. Yet "the power of these weapons increases ineluctably and has multiplied in just a few decades" (Lorenz, 1974: 156). "We have not received our weapons from nature, we have made them ourselves. What will be quicker: the development of these weapons or that of the feeling of responsibility, inhibition without which our species will be annihilated by its own creations? We must make this inhibition ourselves, because we absolutely cannot allow ourselves to trust our instincts" (Lorenz, 1974: 156).

act's seriousness lessens with distance. The parallel with layoffs in SME or in large companies seems defensible here. Laying people off in a large company is never an easy thing to do, but doing so in an SME, given the proximity between those involved, has consequences similar to those of having to stab someone to death!

Let us now look at some examples of the trauma experienced by those obliged to lay people off in the context of SME. Mr Jacky V. is the founder and director of a small printing company in Montpellier in the south of France. Today, the company has around twenty employees. In the course of an interview, Mr V. recounted his first experience of laying off someone: *"I had a handicapped employee. On two occasions, I lent him money because his son had drug problems (20,000 French francs, twice, a total of around 6,000 Euros). A few days after I lent him the second sum of money, he arrived at work with a brand new motorbike! I have to say I was very surprised. Another time, I offered to take all my staff to Courchevel on a ski trip. In general, I pay for everything for my employees. I have even bought them gloves sometimes, if they did not have any. For one such trip, one of my employees could not come, so I decided to give him a bonus of the amount spent per head on the trip for the others. Just then, my handicapped employee came and asked me to pay him the same amount. This employee had always had an opportunistic streak, in fact. Until the day I found out that he had been stealing from the company. After sacking him, the employee in question went to the unfair dismissal tribunal, which sentenced me to a fine of 14,000 Euros because I had not sent a letter to the social organisations to try and reclassify his post, which was a handicapped person's post. On appeal, the fine was brought down to 7,000 Euros. But the truth of the matter is that the day I sacked him, I went back into my office, closed the door (which I normally leave open) and I started to cry"*. A director who cries is a rare sight and is the sign of trauma. Today, Jacky V. is a member of the CGPME (Confédération Générale des Petites et Moyennes Entreprises, a French trade union for SME owners) and states that thanks to his contact with the union, he is able to "subcontract" layoff policies as a means of protecting himself. Another account goes in the sense of trauma caused by the decision to lay off someone. Didier D. is a journalist and managing director of a business economics monthly magazine in the Rhone-Alps region. He stated that he had to consult a doctor after making his first layoff decision. He was told his heart rate was 150 – 160 beats per minute. Two months later, he had to have heart surgery. He personally believes that there is a cause and effect relationship. Although several works show that the health of people laid off tends to worsen (Hugues, 2000), we suggest that the health of a director of an SME who has to lay someone off can also worsen following the decision, often experienced as something difficult.

3. Isolation as a factor that amplifies an employer's suffering the face of layoffs.

One of the particularities of SME that we have mentioned is proximity. A second particularity associated with SME is the isolation, not to say solitude, of the owners (Gumpert and Boyd, 1987). Psychologists have shown that collective examination juries tend to give a wider range of marks than when there is just one corrector. It is said to be the obligation of assuming a decision that incites people who are isolated to minimise the risks. It can therefore be supposed that the same is true of decisions to lay off someone. An HR manager is rarely alone at the precise moment at which he must put the layoff into practice. He can talk to a number of colleagues with the same job and who can sympathise with any doubts he may have. Similarly, the director of a large company is covered by the collective nature of the decisions made by his board of directors or executive board. Big bosses are rarely isolated. They are surrounded by a multitude of other directors and senior executives who can help support them in the making of this type of decision. This collegial structure is not common in

SME, and even less so in very small companies. Directors often find themselves alone when it comes to making layoff decisions and it is difficult for them to talk to their other employees given that their natural stance would be to unite behind the person being laid off rather than behind the one making the decision. It can thus be supposed that the decision to lay someone off is an extreme decision that is only envisaged as a last resort. We can thus then imagine quite well that there are SME that have gone out of business because the owner lacked the courage to lay employees off in time. This is why Boyd and Gumpert (1983: 48) recommend “sharing experiences with other business owners. By listening to the successes and failures of others, we acquire greater objectivity, and this is eminently beneficial”. Several members of the CJD (Centre for Young Managers), a French movement for business owners, emphasised the advantage of work groups organised by owner associations in the form of “mirror commissions”. The question of layoff is often at the very heart of their discussions.

Conclusion

This article is a plea in favour of future research into the suffering of employers. The absence of work on the suffering of employers is a serious problem as it could allow us to believe that this absence means that the owners of SME have no feelings and do not suffer when they have to lay someone off. This could lead us to seeing owners as “cold-hearted monsters” who have no compassion for the suffering of their now-redundant former employees. Even if no one has written anything of the kind, the total absence of research into the suffering felt by those obliged to lay people off nevertheless gives the impression that this is an aspect that simply does not exist.

There is, however, a certain truth that needs to be re-established. Let us give justice to all the men and women, owners of SME, who, for reasons as varied as market pressure or the fact of serious professional malpractice on the part of an employee, have been obliged to make this difficult decision. For it is never easy to let go someone you have worked alongside for years, even decades. It is not easy to have to announce this decision face-to-face, looking the person right in the eyes. It is not easy to have to recognise your own failings, because laying off an employee also means changing your mind, recognising that perhaps you made a mistake when you hired the person, or that you decided to hire someone despite insufficient progress in your turnover. Owners can have very strong feelings of guilt at the idea that they are the sole person responsible for the situation. It is not easy to have to face up to this type of event in a small company where all the other employees are sometimes even an audience that hears and sees all that goes on. It is difficult in the confined space of an SME to escape the presence of the other employees, who thus become spectators, perhaps even in the eyes of certain people, the accomplices of a difficult situation. Is the owner’s social responsibility not at stake here? Let us not forget the suicide of Pierre Jallate, the founder of a small, family-run shoe factory, who could not bear to see the company, which had been sold to an American group a few years earlier, totally delocalise its production from the village of Saint Hippolyte du Fort in the south of France. This suicide shows to what extent the owners of SME are much more than merely company directors. They are sometimes also the main employer in a village. Even if this is not their aim, they become notable figures in their community. This symbolic status creates obligations and reinforces the social responsibility of the owners of small companies. In such circumstances, laying someone off brings this status into doubt. The ex-employer becomes a neo-layoff-maker. This changes the way others regard him. The smaller the village in which the SME is situated (a point that is very common in France, which has 36,000 towns and villages), the greater the shock wave provoked by the announcement that there will be layoffs. The shock wave can even result in dramatic events

that are difficult to overcome. To what extent will the owner's children suffer at school as a result of this? Do the owner's children not now become the children of he-who-lays-people-off? The children of those laid off may perhaps be at school with the owner's children. How will these children react in the school playground? If the employee loses his status of employee, does he-who-lays-people-off not also lose his status of employer, given that he is no longer employing?

The suffering of business owners is something they themselves rarely admit to and something that specialists ignore. As such, it is a *terra incognita*, at the intersection of many concerns that have never overlapped. This suffering, as ignored by researchers as it is disowned by business owners, is nevertheless a very real subject. The suffering of business owners exists, and to deny it would be a serious mistake. Stress, anxiety, pressure, fear of the future, the burden of responsibility, overwork... all these are symptoms generally considered by specialists in workplace medicine as factors that increase workplace risks. How is it possible to not take into account this reality in the context of business owners, where the directors of SME are constantly confronted by these risk factors? Recognising the existence of this form of suffering would be a first step, and would be of a certain comfort. After all, before being a social phenomenon, suffering is above all human.

Bibliography

- Armstrong-Stassen M (2004), "The Influence of Prior Commitment on the Reactions of Layoff Survivors to Organizational Downsizing", *Journal of Occupational Health Psychology*, Vol. 9, No. 1, 46–60.
- Boyd D.P. et D.E. Gumpert D.E., « Coping with entrepreneurial stress », *Harvard Business Review*, mars/avril, p. 44-64, 1983.
- Brockner, J., Grover, S., Reed, T. F., & DeWitt, R. L., (1992), "Layoffs, job insecurity, and survivors' work effort: Evidence of an inverted-U relationship", *Academy of Management Journal*, 35, 413–425.
- Brockner, J., Konovsky, M., Cooper-Schneider, R., Folger, R., Martin, C., & Bies, R. J. (1994), "Interactive effects of procedural justice and outcome negativity on victims and survivors of job loss", *Academy of Management Journal*, 37, 397-409.
- Chanlat J.F. (1999), *Sciences sociales et management – plaidoyer pour une anthropologie générale*, Editions Eska, 116p.
- Clair J.A.; Dufresne R.; Jackson N. and J. Ladge (2006), "Being the Bearer of Bad News: Challenges Facing Downsizing Agents in Organizations", *Organizational Dynamics*, Vol.35, Iss. 2, p. 131-144.
- Courpasson D (2006), *Soft Constraint: Liberal Organizations and Domination*, Copenhagen Business School Press, 242p.
- Fabre C., « Les plans sociaux en PME : quelle problématique de recherche ? », *Actes du 4^{ème} congrès de l'Association francophone de Gestion des Ressources Humaines*, Paris, 1993.
- Fabre C., « Le plan social, acte de gestion et objet à gérer dans les PME », *Actes du 5^{ème} congrès de l'Association francophone de Gestion des Ressources Humaines*, Montpellier, 1994.
- Fabre C., *Les conséquences humaines des restructurations – Audit de l'implication des rescapés après un plan social*, Editions l'Harmattan, 286p, 1997.
- Friedmann G (1972), *Sept études sur l'homme et la technique – le pourquoi et le pour quoi de notre civilisation technicienne*, Editions Denoël-Gonthier, 216p.

Gumpert D.E. et Boyd D. P., « The loneliness of the small-business owner », *Harvard Business Review*, November-December, p. 18-24, 1984.

Hughes J.L, (2000), “Avoidance of Emotional Pain During Downsizing in a Public Agency”, *Consulting Psychology Journal: Practice and Research*, Vol. 52, No. 4, 256-268.

Lorenz K (1952), *King Solomon's Ring* (titre français : *Il parlait avec les mammifères, les oiseaux et les poissons*, Editions J'ai Lu, 182p, 1974).

Lorenz K (1966) ; *On Aggression* (titre français : *L'agression : une histoire naturelle du mal*, Flammarion, 1993).

Milgram S., *Obedience to Authority: An Experimental View*, Harper Collins, 2004 (titre français : *Soumission à l'autorité*, Calmann-Lévy, Paris, 1974).

Noer D.M (1993), *Healing the wounds: Overcoming the trauma of layoffs and revitalizing downsized organizations*, Jossey-Bass, 248 p.

Pivert I., *Plan social – entretiens avec des licenciés*, Editions du Sextant, 2004.

Skarlicki D.P, Ellard J.H and B.R.C. Kelln (1998), “Third-Party Perceptions of a Layoff: Procedural, Derogation, and Retributive Aspects of Justice”, *Journal of Applied Psychology*, Vol. 83, No. 1, 119-127.

Torrès O, (2004-a), “The SME concept of Pierre-André Julien: An analysis in terms of proximity”, *Piccola impresa, Small Business*, Vol. 17, n°2, p. 51-62.

Torrès O, (2004-b), “The proximity law of small business management: between closeness and closure”, 49th *International Council of Small Business (ICSB)*, Johannesburg, South Africa.

Torrès O, (2007), *La recherche académique française en PME : les thèses, les revues, les réseaux*, Coll. Regards sur les PME, n°14, La documentation française, 136p.

Veciana J.M., « The Future of Entrepreneurship Research », *Proceedings of 53rd International Council Small Business*, Halifax, Canada, 2008.

Zecchini L., « Défense : l'explosion du marché des drones », *Le Monde*, 18 juin, p.23, 2008.

Cultural Matters in Entrepreneurial Firms: Abusive Supervision and Its Consequences

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ABSTRACT

In this conceptual paper, we examine influences of power distance and collectivism on abusive supervision and its consequences in different cultural workgroups. We argue that high power distance positively influences subordinates' perceived abusive supervision, which in turn will negatively influence organizational commitment and positively influence turnover intentions. We further argue that collectivism moderates the relationships between perceived abusive supervision and its negative consequences. Our arguments are founded in theory related to national culture and counterproductive work behavior and have important practical and theoretical implications for understanding how employees' perceptions of abusive supervision and its consequences vary across different cultural dimensions. Moreover, within the context of multinational entrepreneurial firms we consider how abuse of power and turnover result in serious consequences for this particular type of organization.

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INTRODUCTION

Although abusive supervision affects an estimated 13.6 percent of U.S. workers and these behaviors incur substantial costs (Tepper 2007), the occurrence of abusive supervision might be more common in other countries, especially those in Asia. Abusive supervision is defined as a “subordinate’s perceptions of the extent to which supervisors engage in the sustained display of hostile verbal and nonverbal behaviors, excluding physical contact” (Tepper 2000, p. 178). For example, abusive supervisors publicly ridicule and undermine subordinates reporting to them (Ashforth 1994). The notion of abusive supervision has been studied exclusively from a Western perspective (Mitchell and Ambrose 2007; Tepper 2007; Tepper, Henle, Lambert, Giacalone, and Duffy 2008), yet we posit that there may be cultural variation within employees’ experience of and reaction to abusive supervision.

In the workplace, supervisors may be motivated to abuse their subordinates because of subordinates’ undesirable behaviors such as poor performance, inadequate behavior, task-related mistakes, and violation of norms. Even if supervisors do not notice these harmful behaviors, they can manage their subordinates in an abusive manner in order to proactively prevent those behaviors. Managers who abuse their subordinates tend to perceive this strategy as an effective management tool, and mistreat their subordinates to accomplish their objectives (Tepper 2007). For example, Tepper (2007, p. 265) notes: “a supervisor may mistreat subordinates to elicit high performance or to send the message that mistakes will not be tolerated.” Thus, when abusive supervisors notice employees, who do not satisfy their expectation, they are prone to behave abusively. As a result,

abusive supervision is an output of reciprocal interaction between supervisors and subordinates, and negative emotional enhancement.

Tepper (2007) recommended that “abusive supervision is a multilevel phenomenon and the field needs to move beyond individual-level research, which is the predominant approach in extant work, to investigate antecedents and moderators that operate at the level of the supervisor, organization, industry, and national culture” (p. 281). As the world and our workplace are becoming more globalized and interrelated across nations, the interest on national culture research is significantly increasing (Adler 1986; Balceris, Dunning, and Miller 2008; Gelfand, Nishii, and Raver 2006; Hofstede 1980). Based on Tepper’s (2007) recommendation, we note that previous studies on abusive supervision have been examined on an individual level in spite of its inherent multilevel characteristics (Bamberger and Bacharach 2006; Burriss, Detert, and Chiaburu 2008; Duffy and Ferrier 2003). Thus, there is an opportunity to consider the effects of national cultural on the experience of abusive supervision. Therefore, the purpose of this research is to explore the relationship between national culture difference and prevalence of counterproductive work behavior. In this paper, we will examine the influence of national culture constructs on subordinates’ perceived abusive supervision and its consequences.

Second, we consider the negative behavioral relationship between supervisors and their subordinates in multinational entrepreneurial firms. Many researchers have recently studied the negative side of entrepreneurship (Burt 1999; Caruana and Chircop 2001; Kets de Vries 1995; Tonoyan 2005; Vecchio 2007). For example, high turnover has been a significant problem in entrepreneurial firms and has hindered long-term

growth of small business (Schaper 2007). Moreover, Vecchio (2007) noted that abuse of power was a significant problem in work teams in an entrepreneurial leadership study. Noting these emerging interests on the negative side of entrepreneurship, we propose a series of propositions exploring the phenomenon of national culture and abusive supervision. Because of their relatively immature organizational setting, entrepreneurial firms seem to be easily affected by national culture differences (Tan 2002). Therefore, we anticipate multinational entrepreneurial firms will provide an appropriate context for this research.

NATIONAL CULTURE DIFFERENCES AND COUNTERPRODUCTIVE WORKPLACE BEHAVIOR

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 four cultural dimensions: power distance, collectivism, masculinity, and uncertainty avoidance. Triandis (1989) added the dimension of tightness-looseness. These frameworks have been frequently applied and explored by other researchers in the behavioral and cultural literature (Earley 1993; Gelfand et al. 2006; Grandey and Kern 2004; Lee, Pillutla, and Law 2000; Moorman and Blakely 1995; Wheeler 2002).

Researchers have identified certain characteristics of national culture (Hofstede 1984; Triandis 1989) and we attempt to find some common characteristics within these various definitions. 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 1985). In this regard, culture is not stable because it is unobservable and constantly changing (Hofstede 1984). Triandis (1989) demonstrated the evolutionary aspect of “culture” that specifies designs for living that have been proven to be effective in the past and ways to think about social behavior that have been reinforced in the past. If culture has dynamic and evolutionary aspects (Hofstede 1984; Triandis 1989), how can we understand national culture differences? People look at the same situation differently simply because of individual differences in the knowledge and values they use to interpret the problem (Cronin and Weingart 2007). We apply this simplification process for understanding national culture differences. For example, “People from East Asia sample their collective self more frequently than do Europeans or North Americans” (Triandis 1989, p. 508). The reason why we use this simplification process is to make the different cultural aspects of world easy to be memorized and differentiated. Therefore, understanding national culture differences is not only an output of the simplification process but also is constantly changing and evolving.

Based on the assumption that national culture has dynamic aspects and can be understood by different perspectives, we note the increased interest on the relationship between national culture differences and counterproductive workplace behavior (see, Bullying: Nesdale and Naito 2005; Withdrawal: Addae and Johns 2002; Whistle-blowing: MacNab et al. 2007). Recent research by Warren (2003) acknowledges that counterproductive work behavior is a normative phenomenon. That is what defines counterproductive behavior in one culture may not be counterproductive in another. According to Poortinga (1992), national culture sets up boundaries on human behavior by

defining acceptable and unacceptable behaviors. It all depends on the norms, or prevailing ideologies operating in organizations. For example, Tepper (2007) emphasized that “abusive supervisory behavior is a significant social problem that warrants continued scholarly inquiry” (p. 262). Tepper’s perspective is a dominant understanding on abusive supervision in western management research. In spite of this predominant consensus, we propose an alternative explanation of the same phenomena from the eastern perspective (see Hui, Lee, and Rousseau 2004), as the experience of national culture will impact the relationships observed. Therefore, our research framework is based on the notable cultural differences between eastern and western workgroups in the area of counterproductive work behavior. We especially focus on how abusive supervision and its consequences are differently identified by supervisors and subordinates. The theoretical model is shown in Figure 1 and discussed below.

Insert Figure 1 about here

STUDY PROPOSITIONS

Power distance and abusive supervision

We expect that abusive supervision might be more strongly perceived by subordinates in one culture than the others, according to national culture differences. Thus, we predict a cultural level construct could be a potential antecedent toward employees’ perceived abusive supervision. Hofstede (1984) introduced the four dimensions explaining cultural difference; power distance, collectivism, masculinity, and uncertainty avoidance. Among those dimensions, we focused on *power distance* as an antecedent of abusive supervision. Power distance is defined as “the extent to which the

less powerful person in a society accepts inequality in power and considers it as normal” (Hofstede 1984, p. 390). This inequality can be identified within any culture, but the degree to which it is tolerated varies between cultures (Hofstede 1984). In high power distance cultures, employees may endure some undesirable and/or abusive treatments from their supervisors because of this inequality of power. Tepper (2007) suggested that abusive supervision may occur more frequently in countries with high power distance where it is more acceptable to have unequal power distributions within social institutions and for organizational representatives to invoke legitimate authority. Thus, in a culture with high power distance, we expect that people would consider abusive supervisor as normal, and this cultural environment would create more abusive supervision.

We believe that higher power distance provides supervisors with more authority and higher hierarchical inequality, and thereby enhances the possibility that they will abuse their power and authority. First, higher power distance provides more authority to supervisors. An authoritarian style can be defined as the “supervisor’s behavior that asserts absolute authority and control over subordinates and demands unquestionable obedience from subordinates” (Cheng, Chou, Wu, Hwang, and Farh 2004, p. 91). Based on this definition, Aryee, Chen, Sun, and Debrah (2007) hypothesized that an authoritarian style will be positively related to abusive supervision. Ashforth (1997) also described abusive managers as those who use their power and authority to mistreat employees (Mitchell and Ambrose 2007). Second, higher power distance is strongly associated with higher hierarchical inequality. Tepper (2007) mentioned that abusive supervision involves continuing exposure to hierarchical mistreatment. Higher power distance cultures can create higher hierarchical inequality, which in turn induces

supervisors to mistreat their subordinates. However, subordinates who have power such as financial and social resources will be less likely to be abused by their supervisors. Grandey and Kern (2004) explained that employees in higher power occupations have more financial and social resources compared with low-power employees and thus experience less threat from abusive supervision (Tepper 2007). Therefore, higher power distance provides more suitable ground for subordinates' perceived abusive supervision, because of greater authority for supervisors and higher hierarchical inequality between supervisors and subordinates.

P1: High power distance between a supervisor and subordinate is positively related to subordinates' perceived abusive supervision.

Abusive Supervision, Organizational Commitment and Turnover intention

Meyer and Allen (1991) conceptualized commitment as a psychological state that increases the likelihood that an employee will maintain membership in an organization. According to their component models of commitment, prior research indicates that there are some mind sets which can characterize an employee's commitment. First, affective commitment is defined as the employee's positive emotional attachment to the organization (Meyer and Allen 1991). Employees who are affectively committed strongly identify with their goals of the organization and desire to remain a part of the organization. Second, normative commitment is the sense that the individual commits to and remains with an organization because of feelings of obligation (Meyer and Allen 1991).

We assume that subordinates' perceived abusive supervision will negatively influence their organizational commitment. Tepper et al. (2008) argued that "abused

subordinates should believe that their employer cares little about their well-being and should be unlikely to identify with or develop a sense of attachment to their organization” (p. 722). Therefore, abused subordinates may exhibit low organizational commitment, compared to their non abused counterparts. Consistent with that notion, several studies suggest that abusive supervision is negatively related to subordinates’ affective commitment (Aryee et al. 2007; Duffy, Ganster, and Pagon 2002; Tepper, Duffy, Hoobler, and Ensley 2004; Tepper et al. 2008). While these studies mainly focused on affective commitment, we expect that abusive supervision will also influence employees’ normative commitment, because employees experiencing severe abusive supervision should also feel less of an obligation to support the organization, consistent with the findings of Tepper (2000). Therefore, we note that perceived abusive supervision will negatively influence their employees’ organizational commitment in both affective and normative forms.

P2: Perceived abusive supervision is negatively related to subordinates’ organizational commitment (in both affective and normative forms).

We also posit that subordinates’ perceived abusive supervision will positively influence their turnover intention. Research has revealed that abusive supervision is associated with higher levels of turnover and psychological distress (Mitchell and Ambrose 2007). After subordinates perceive severe abusive supervision, their job strain tends to increase (Harris, Kacmar, and Boonthanum 2005), which in turn leads to their intentions to leave. Increased turnover intention reflects an ongoing psychological detachment from an organization (Griffeth, Hom, and Gaertner 2000; Tett and Meyer 1993). Several studies suggested that psychological detachment is a consequence of

abusive supervision (Tepper 2000; Tepper and Lockhart 2005; Yagil 2006). As detachment occurs, employees become physically uninvolved in tasks and emotionally disconnected from others in ways that hide their emotion, beliefs, values, and their personal connections with others (Kahn 1990; Burris et al. 2008). Other research also notes that abusive supervision is positively related to intentions to leave (Schat, Frone, and Kelloway 2006; Tepper 2000). Tepper (2000) clearly showed that subordinates who perceived abusive supervision were more likely to quit their jobs. Therefore, we posit that abusive supervision positively influences subordinates' turnover intention.

P3: Perceived abusive supervision is positively related to subordinates' turnover intention.

Collectivism as a Moderating Mechanism

Individualism-collectivism is a bi-polar concept that “an individualist (1) would consider his/her personal interests more important than the interests of a group, (2) he/she would look out for him/herself, and (3) would consider the attainment of his/her personal goals of primary importance” (Earley 1989; Wagner and Moch 1986; Moorman and Blakely 1995, p. 129). Meanwhile, a collectivist would consider the interests of the group take precedence over those of the individual (Moorman and Blakely 1995). Research on collectivism has focused on the relationship between the in-group and out-group and how people from different cultures behave (Leung 1988; Leung and Bond 1984; Chan, Gelfand, Triandis, and Tzeng 1996). According to Hofstede (1984), “collectivist cultures assume that individuals belong to one or more close in-groups, from which they cannot *detach* themselves and these in-groups protect the interest of their members, but in turn expect their *permanent loyalty*” (p. 390). Along with Hofstede's (1984) argument, a

considerable literature suggests that collectivists obey in-group authorities and are willing to fight and die to maintain the integrity of the in-group, whereas they distrust and are unwilling to cooperate with members of out-groups (Triandis 1972; Triandis 1989). In-groups are defined by common fate, common goals, and/or the need to distribute resources to all in-group members for surviving (Triandis 1989). In collectivistic culture, there is a strong coherence of in-group and antipathy against out-groups. When members of the in-group perceive that others have different values and beliefs, they tend to regard others as their enemy. For example, in collectivistic cultures, there are severe conflicts between different political parties (e.g., on-going fights between right and left political parties), yet strong coherence has been maintained by the similar geographic locations and educational backgrounds (e.g., alumni membership and hometown membership). Thus, we anticipate that collectivism will be a relevant factor in moderating the relationship between abusive supervisor and its consequences.

First, we believe that collectivism will moderate the negative relationship between abusive supervision and organizational commitment. Yousef (2000) argued that national culture moderates the relationship of leadership behavior with organizational commitment. In this paper, we point out collectivism as an important element of national culture. Generally, in collectivistic cultures the employee-employer relationship (*quanxi*) is given priority over tasks (Parkes, Bochner, and Schneider 2001; Hui et al. 2004). This relationship oriented culture can make a significant contribution to the increase of organizational commitment. Parkes et al. (2001) hypothesized that there should be a direct relationship between collectivism and organizational commitment such that collectivism measured at individual, organizational, and national level will predict greater

commitment. In this paper, we argue that collectivism moderates the relationship between abusive supervision and organizational commitment.

Many cross-cultural studies have revealed that collectivists tend to have a stronger commitment to their organizations and subordinate their individual goals to group goals (Earley 1989; Felfe, Yan, and Six 2008; Triandis 1995; Jung and Avolio 1999). Collectivists maintain longer-term commitment to their organizations and view interpersonal relationships (*quanxi*) as being more important than specific job knowledge and skills (Jung and Avolio 1999; Hui et al. 2004). Indeed, many organizations in collectivist cultures highlight the importance of in-group solidarity and maintaining lifelong commitment to the organization (Ungson, Steers, and Park 1997; Jung and Avolio 1999). Collectivists are expected to identify with their common purpose and they also typically exhibit high levels of loyalty and commitment to the organization (Felfe et al. 2008; Jung, Bass, and Sosik 1995; Jung and Avolio 1999), in spite of a temporal hardship such as abusive supervision. Therefore, collectivism will moderate the negative relationship between abusive supervision and organizational commitment.

P4a: Collectivism will moderate the relationship between perceived abusive supervision and organizational commitment such that the relationship will be more strongly positive when subordinates are high collectivists.

Second, we also believe that collectivism will moderate the positive relationship between abusive supervision and turnover intention. Tepper (2007) postulated that subordinates' workplace context moderates abusive supervision and its outcomes. We believe that collectivism can be an important workplace context that moderates the relationship between abusive supervision and turnover intention. Collectivism seems to

be strongly associated with positive reciprocity which promotes stability in relationships through considerate, valued, and balanced exchanges (Mitchell and Ambrose 2007). Reciprocity represents “quid pro quo behaviors, meaning that something given generates an obligation to return an equivalent gesture” (Mitchell and Ambrose 2007, p. 1161). Mitchell and Ambrose (2007) hypothesized that the relationship between abusive supervision and supervisor-directed deviance would be stronger when individuals hold higher negative reciprocity beliefs, which is directly associated with our logic as turnover intention is one type of supervisor-directed deviance and collectivism is a kind of positive reciprocity belief. For example, “East Asian collectivist cultures emphasize reciprocal relationships; people are more likely to perceive relationships as deeply interdependent and seek a richer emotional connection with a potential partner” (Gelfand, Major, Raver, Nishii, and O’Brien 2006; Branzei, Vertinsky, and Camp 2007, p. 63).

Moreover, there is a critical issue in collectivistic organizations; as severe conflicts between in-group and out-group derived from strong collectivism can occur (Triandis 1989). Collectivists build strong bonds, share resources among in-group members, and feel interdependent with in-group members (Hui and Triandis 1986). They emphasize the integrity of in-groups but they tend to be extremely exclusive toward out-groups (Triandis 1989). This exclusive aspect of collectivism sometimes induces extreme in-groups versus out-group conflicts. In this exclusive collectivistic culture, employees may find it difficult to change their occupations, because their turnover could be regarded as a betrayal behavior toward in-group members. Although abusive supervision may increase employees’ intention to leave, collectivists concerned more about losing their in-group membership tend not to leave their company. Therefore, we believe collectivism

moderates the positive relationship between abusive supervision and turnover intention.

P4b: Collectivism will moderate the relationship between perceived abusive supervision and turnover intention such that the relationship will be more strongly weakened when subordinates are high collectivists.

CONTRIBUTION AND IMPLICATIONS

The purpose of this paper was to identify important cultural antecedents to employee perceptions of abusive supervision and the impact of such perceptions on employees' organizational commitment and turnover intention. In doing so, we make an important contribution to the behavioral and cultural literature. We compared cultural differences and their influence on abusive supervision in workgroups using Hofstede's (1984) cultural constructs of power distance and collectivism. Although many counterproductive work behavior studies were focused on psychological research (Mitchell and Ambrose 2007; Robinson and Bennett 1995; Tepper 2000; Zellars, Tepper, and Duffy 2002), we explored the broader concept of cultural dimensions and their impacts on counterproductive work behavior from practical and theoretical perspectives. To our knowledge, there have been some emerging research on the relationship between national culture differences and counterproductive workplace behavior (see, Bullying: Nesdale and Naito 2005; Withdrawal: Addae and Johns 2002; Whistle-blowing: MacNab et al. 2007). Therefore, our research on cultural matters provides an additional contribution to the national culture and counterproductive workplace behavior literature. We discuss the implications and the suggestions for future research.

Theoretical Implication

This research provides an important theoretical implication to the national culture and counterproductive workplace behavior literature. Our propositions lead us to reconsider abusive supervision from the collectivist perspective. We note that although high power distance stimulates abusive supervision, collectivism mitigates the negative consequences triggered by abusive supervision. Abusive supervisors in workgroups tend to manage their subordinates severely, but also sometimes unify them toward a collective vision. Collectivism requires a value that individuals sacrifice themselves for collective goals even in difficult situation and moment, and leads in-group members to attach to the organization as a form of long-term commitment. The central role the workgroup plays in collectivist cultures is very similar to some of the main values associated with transformational leadership (Jung and Avolio 1999). Although transformational leadership can also have a similar influence on organizational commitment, it would not be a long-term effect (House and Aditya 1997). However, strong collectivist culture leads members to commit to their organization and to develop their functional specialties.

Practical Implication

This study also has an important practical implication for understanding cultural differences in workgroups. Employees working in individualist culture frequently change their job in order to earn a better salary than those in collectivist culture (Ramesh 2007). This changing of occupation might be beneficial for personal gains but could be a significant loss for the organization. Unfortunately, after the financial crisis in 1998, many Asian entrepreneur firms aggressively adapted to the US employment culture that emphasizes short-run performance and diluting the lifelong employment culture. This

cultural change created huge anxiety, fear, and depression among Asian workers, and eventually weakened the organization capacity. Because of this unexpected culture change, many small businesses launching during that period failed to survive and eventually perished. Although abusive supervision can be considered as a counterproductive work behavior in western perspective, it is somewhat an inevitable consequence in the high power distance culture. We can find a new managerial concept from the context of remaining in an organization in spite of temporal hardship for individuals. Thus, it would be conceivable to integrate the strengths of entrepreneurial organizational culture and those of national culture.

Future Research Directions

While we focused here on cultural impacts on negative workplace behavior, future research might examine other meaningful ways to investigate cultural impacts on positive workplace behavior such as organizational citizenship behavior (OCB). For example, Moorman and Blakely (1995) found that collectivism is highly associated with OCB. Such investigations will yield a better understanding of how different organizational constituents react to national culture differences. In addition, such research would provide information on how managers should best deal with subordinates from different cultural backgrounds.

Another fruitful area for future research is to examine whether power distance and collectivism are related, either directly or indirectly to other important counterproductive workplace behavior outcomes. For example, power distance can be positively related to bullying, sexual harassment, and/or incivility. As we mentioned earlier, there are still limited studies on the relationship between national culture and counterproductive

workplace behavior. We hope that this study will stimulate successive national culture and counterproductive workplace behavior researches.

Conclusion

This study adds to our understanding of how employee responses under abusive supervisors vary for employees at different cultural contexts. We shed light on cultural factors that influence perceived abusive supervision, and the impact of employees' perceived abusive supervision on organizational commitment and turnover intention. Moreover, we examine this relationship in the context of multinational entrepreneurial firms for whom turnover is a relevant concern. We posit that power distance between supervisors and their subordinates positively influences employees' perceived abusive supervision. In addition, perceived collectivism partially moderates the relationship between abusive supervision and employees' organizational commitment and turnover intention. We hope that this study will promote future research related to how employee responses to abusive supervision develop and how these responses differ among different cultural contexts.

REFERENCE

- Addae, H. M. and Johns, G. (2002) *Voluntary employee withdrawal and inattendance: A current perspective*: 21-51. New York, NY: Kluwer Academic/Plenum Publishers.
- Adler, N. J. (1986) *International dimensions of organizational behavior*. Boston: Kent.
- Aryee, S., Chen, Z. X., Sun, L.-Y., and Debrah, Y. A. (2007) Antecedents and outcomes of abusive supervision: Test of a trickle-down model. *Journal of Applied Psychology*, 92(1), 191-201.
- Ashforth, B. (1994) Petty tyranny in organizations. *Human Relations*, 47, 755-778.
- Ashforth, B. (1997) Petty tyranny in organizations: A preliminary examination of antecedents and consequences. *Canadian Journal of Administrative Sciences*, 14, 126–140.
- Balcetis, E., Dunning, D., and Miller, R. L. (2008) Do collectivists know themselves better than individualists? Cross-cultural studies of the holier than thou phenomenon. *Journal of Personality and Social Psychology*, 95(6), 1252-1267.
- Bamberger, P. A. and Bacharach, S. B. (2006) Abusive supervision and subordinate problem drinking: Taking resistance, stress and subordinate personality into account. *Human Relations*, 59(6), 723-752.
- Branzei, O., Vertinsky, I., and Camp, R. D. (2007) Culture-contingent signs of trust in emergent relationships. *Organizational Behavior and Human Decision Processes*, 104(1), 61-82.
- Burris, E. R., Detert, J. R., and Chiaburu, D. S. (2008) Quitting before leaving: The mediating effects of psychological attachment and detachment on voice. *Journal of Applied Psychology*, 93(4), 912-922.

- Burt, R. S. (1999) Entrepreneurs, distrust, and third parties: A strategic look at the dark side of dense networks. *Shared cognition in organizations: The management of knowledge*: 213-243. Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- Caruana, A. and Chircop, S. (2001) The dark side of globalization and liberalization: Helpfulness, alienation and ethnocentrism among small business owners and managers. *Journal of Nonprofit and Public Sector Marketing*, 9(4), 63-73.
- Chan, D. K., Gelfand, M. J., Triandis, H. C., and Tzeng, O. (1996) Tightness-looseness revisited: Some preliminary analyses in Japan and the United States. *International Journal of Psychology*, 31(1), 1-12.
- Cheng, B. S., Chou, L. F., Wu, T. Y., Huang, M. P., and Farh, J. L. (2004) Paternalistic leadership and subordinate responses: Establishing a leadership model in Chinese organizations. *Asian Journal of Social Psychology*, 7, 89–117.
- Cronin, M. A. and Weingart, L. R. (2007) Representational gaps, information processing, and conflict in functionally diverse teams. *Academy of Management Review*, 32(3), 761-773.
- Duffy, M. K. and Ferrier, W. J. (2003) Birds of a feather...? how supervisor-subordinate dissimilarity moderates the influence of supervisor behaviors on workplace attitudes. *Group and Organization Management*, 28(2), 217-248.
- Duffy, M. K., Ganster, D. C., and Pagon, M. (2002) Social undermining in the workplace. *Academy of Management Journal*, 45, 331–351.
- Earley, G. (1989) Social loafing and collectivism: A comparison of the United States and the People's Republic of China. *Administrative Science Quarterly*, 34, 565-581.

- Earley, P. (1993) East meets West meets Mideast: Further explorations of collectivistic and individualistic work groups. *Academy of Management Journal*, 36(2), 319-348.
- Felke, J., Yan, W., and Six, B. (2008) The impact of individual collectivism on commitment and its influence on organizational citizenship behaviour and turnover in three countries. *International Journal of Cross Cultural Management*, 8(2), 211-237.
- Gelfand, M. J., Major, V. S., Raver, J. L., Nishii, L., and O'Brien, K. (2006) Negotiating relationally: The dynamics of the relational self in negotiations. *Academy of Management Review*, 31(2), 427–451.
- Gelfand, M. J., Nishii, L. H., and Raver, J. L. (2006) On the nature and importance of cultural tightness-looseness. *Journal of Applied Psychology*, 91(6), 1225-1244.
- Grandey, A. A., and Kern, J. (2004) *Biting the hand that serves them: When does customer aggression predict employee exhaustion?* Unpublished manuscript, Penn State University, University Park.
- Griffeth, R. W., Hom, P. W., and Gaertner, S. (2000) A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium. *Journal of Management*, 26(3), 463-488.
- Harris, K. J., Kacmar, K. M., and Boonthanum, R. (2005) *The interrelationship between abusive supervision, leader-member exchange, and various outcomes*. Paper presented at the annual meeting of the Society for Industrial/Organizational Psychology, Los Angeles.
- Hofstede, G. (1980) *Culture's consequences: International differences in work related values*. Beverly Hills, CA: Sage Publication.

- Hofstede, G. (1984) The cultural relativity of the quality of life concept. *Academy of Management Review*, 9(3), 389-398.
- House, R. J., and Aditya, R. M. (1997) The social scientific study of leadership: Quo vadis? *Journal of Management*, 23, 409-473.
- Hui, C., Lee, C., and Rousseau, D. M. (2004) Psychological Contract and Organizational Citizenship Behavior in China: Investigating Generalizability and Instrumentality. *Journal of Applied Psychology*, 89(2), 311-321.
- Hui, C. H., and Triandis, H. C. (1986) Individualism-collectivism: A study of cross-cultural researchers. *Journal of Cross Cultural Psychology*, 17, 225-248.
- Jung, D. and Avolio, B. J. (1999) Effects of leadership style and followers' cultural orientation on performance in group and individual task conditions. *Academy of Management Journal*, 42(2), 208-218.
- Jung, D., Bass, B., and Sosik, J. (1995) Bridging leadership and culture: A theoretical consideration of transformational leadership and collectivistic cultures. *Journal of Leadership Studies*, 2, 3-18.
- Kahn, W. A. (1990) Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33(4), 692-724.
- Kets de Vries, M. F. R. (1995) *Life and death in the executive fast lane: Essays on irrational organizations and their leaders*. San Francisco, CA: Jossey-Bass.
- Lee, C., Pillutla, M., and Law, K. S. (2000) Power-distance, gender, and organizational justice. *Journal of Management*, 26(4), 685-704.
- Leung, K. (1988) Some determinants of conflict avoidance. *Journal of Cross-Cultural Psychology*, 19, 125-136.

- Leung, K., and Bond, M.H. (1984) The impact of cultural collectivism on reward allocation. *Journal of Personality and Social Psychology*, 37, 793-804.
- MacNab, B., MacLean, J., Brislin, R., Aguilera, G. M., Worthley, R., Ravlin, E., Galperin, B. L., Tiessen, J. H., Jenner, S., Bess, D., Lituchy, T. R., and Turcotte, M.-F. (2007) Culture and ethics management: Whistle-blowing and internal reporting within a NAFTA country context. *International Journal of Cross Cultural Management*, 7(1), 5-28.
- Meyer, J. P., and Allen, N. J. (1991) A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1, 61–89.
- Mitchell, M. S. and Ambrose, M. L. (2007) Abusive supervision and workplace deviance and the moderating effects of negative reciprocity beliefs. *Journal of Applied Psychology*, 92(4), 1159-1168.
- Moorman, R. H. and Blakely, G. L. (1995) Individualism-collectivism as an individual difference predictor of organizational citizenship behavior. *Journal of Organizational Behavior*, 16(2), 127-142.
- Nesdale, D. and Naito, M. (2005) Individualism-Collectivism and the Attitudes to School Bullying of Japanese and Australian Students. *Journal of Cross Cultural Psychology*, 36(5), 537-556.
- Parkes, L. P., Bochner, S., and Schneider, S. K. (2001) Person-organisation fit across cultures: An empirical investigation of individualism and collectivism. *Applied Psychology: An International Review*, 50(1), 81-108.
- Poortinga, Y. (1992) *Towards a Conceptualization of Culture for Psychology*, Innovations in Cross-cultural Psychology, Amsterdam: Swets and Zeitlinger.

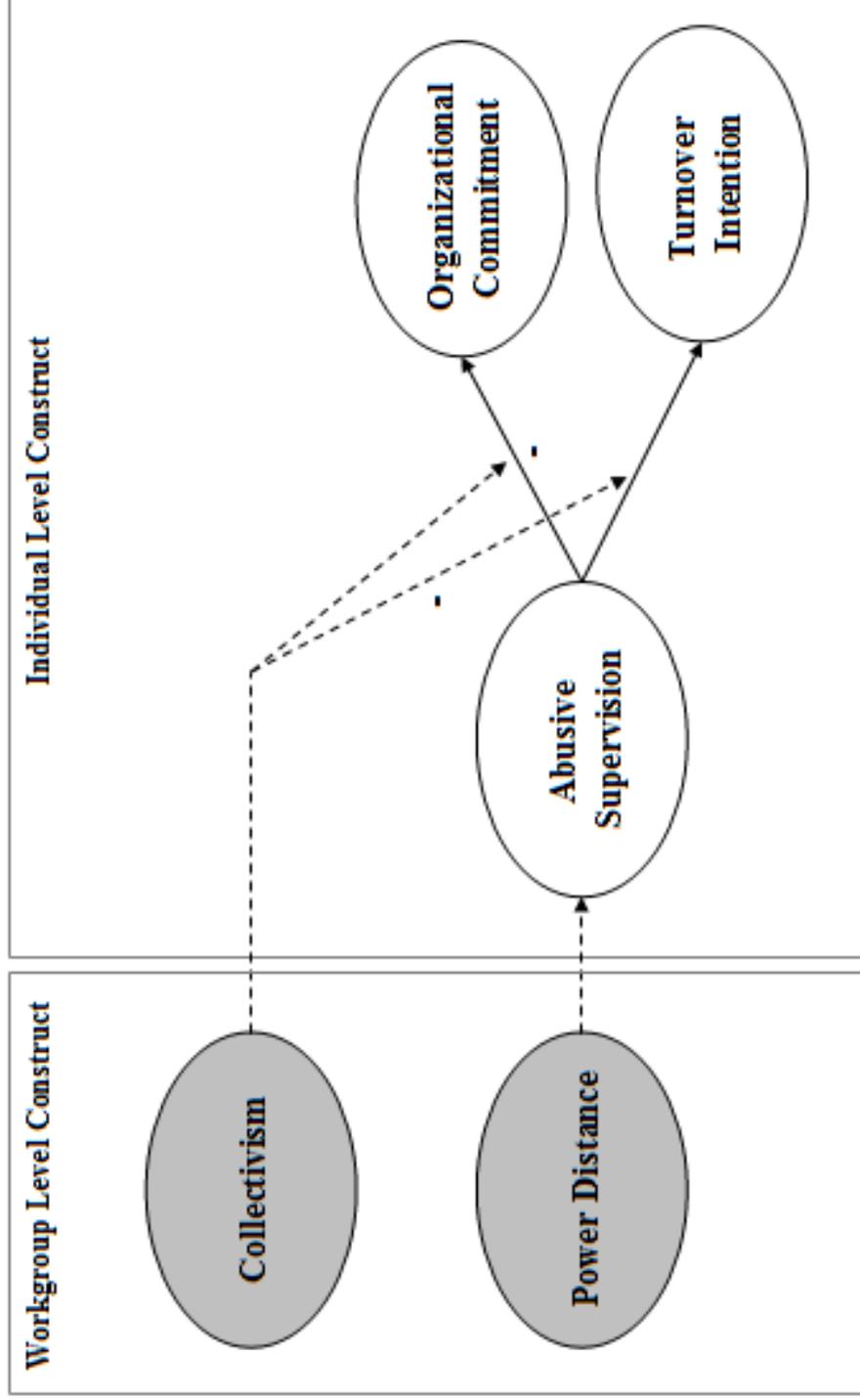
- Ramesh, A. (2007) *Replicating and extending job embeddedness across cultures: Employee turnover in India and the United States*. *The Sciences and Engineering*, 68(4-B), 2699
- Robinson, S. L. and Bennett, R. J. (1995) A typology of deviant workplace behaviors: A multidimensional scaling study. *Academy of Management Journal*, 38(2), 555-572.
- Schaper, M. 2007. A question of turnover. *BRW*, 29(44), 57-57.
- Schat, A. C., Frone, M. R., and Kelloway, E. (2006) *Prevalence of Workplace Aggression in the U.S. Workforce: Findings From a National Study*. Handbook of workplace violence: 47-89. Thousand Oaks, CA: Sage Publications, Inc.
- Schein, E. H. (1985) *Organizational culture and leadership* (1st ed.). San Francisco: Jossey-Bass.
- Tan, J. (2002) Culture, Nation, and Entrepreneurial Strategic Orientations: Implications for an Emerging Economy. *Entrepreneurship: Theory and Practice*, 26(4), 95.
- Tepper, B. J. (2000) Consequences of abusive supervision. *Academy of Management Journal*, 43(2), 178-190.
- Tepper, B. J., Duffy, M. K., Hoobler, J., and Ensley, M. D. (2004) Moderators of the Relationships Between Coworkers' Organizational Citizenship Behavior and Fellow Employees' Attitudes. *Journal of Applied Psychology*, 89(3), 455-465.
- Tepper, B. J. (2007) Abusive supervision in work organizations: Review synthesis, and research agenda. *Journal of Management*, 33(3), 261-289.
- Tepper, B. J., Henle, C. A., Lambert, L. S., Giacalone, R. A., and Duffy, M. K. (2008) Abusive supervision and subordinates' organization deviance. *Journal of Applied Psychology*, 93(4), 721-732.

- Tepper, B. J., and Lockhart, D. (2005) *Abused subordinates' upward maintenance communication: A coping perspective*. In E. Weatherly (Ed.), Proceedings of the annual meeting of the Southern Management Association, Charleston, SC. Clearwater, FL: Southern Management Association.
- Tett, R. P. and Meyer, J. P. (1993) Job satisfaction, organizational commitment, turnover intention, and turnover: Path analyses based on meta-analytic findings. *Personnel Psychology*, 46(2), 259-293.
- Tonoyan, V. (2005) The dark side of trust: Corruption and entrepreneurship-A cross-national comparison between emerging and mature market economies. *Trust and entrepreneurship: A West-East perspective*: 39-58. Northampton, MA: Edward Elgar Publishing.
- Triandis, H. C. (1972) *The analysis of subjective culture*. New York: Wiley.
- Triandis, H. C. (1989) The self and social behavior in differing cultural contexts. *Psychological Review*, 96(3), 506-520.
- Triandis, G. H. (1995) *Individualism and collectivism*. Boulder, CO: Westview Press.
- Ungson, G. R., Steers, R. M., and Park, S. (1997) *Korean enterprise: The quest for globalization*. Boston: Harvard Business School Press.
- Vecchio, R. P. (2007) *Leadership: Understanding the dynamics of power and influence in organizations* (2nd ed.). Notre Dame, IN: University of Notre Dame Press.
- Wagner, J. A., III and Moch, M. K. (1986) 'Individualism-collectivism: Concept and measure', *Group and Organization Studies*, 11, 280-304.
- Warren, D. E. (2003) Constructive and destructive deviance in organizations, *Academy of Management Review*, 28(4), 622-632.

- Wheeler, K. G. (2002) Cultural values in relation to equity sensitivity within and across cultures. *Journal of Managerial Psychology*, 17(7), 612-627.
- Yagil, D. (2006) The relationship of abusive and supportive workplace supervision to employee burnout and upward influence tactics. *Journal of Emotional Abuse*, 6, 49-65.
- Yousef, D. A. (2000) Organizational commitment: A mediator of the relationships of leadership behavior with job satisfaction and performance in a non-western country. *Journal of Managerial Psychology*, 15(1-2), 6-28.
- Zellars, K. L., Tepper, B. J., and Duffy, M. K. (2002) Abusive supervision and subordinates' organizational citizenship behavior. *Journal of Applied Psychology*, 87(6), 1068-1076.

FIGURE 1

The Summary Model of Hypothesized Relationships



***ONLINE MENTORING ACCEPTANCE BY WOMEN
ENTREPRENEURS***

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ONLINE MENTORING ACCEPTANCE BY WOMEN ENTREPRENEURS

by Lloyd G. Gibson and Regina A. Gibson

Online mentoring (OM) can be an important means of communication for women entrepreneurs and is an emerging global phenomenon, as evidenced by the world-wide usage of online mentoring web sites such as those managed by UNIFEM and the International Telementor Program. Identification of OM acceptance factors could improve OM's adoption. This study was based on a 2007 survey of 312 women professionals, 115 of whom were members of a government-sponsored women's small business development center in Southwestern Pennsylvania. The results of this study supported the significance of both mentoring-related factors along with attitudinal factors suggested by the Davis technology acceptance model and the Rogers diffusion of innovations theory. These results could be important in improving the marketing and management of online mentoring programs to women entrepreneurs.

INTRODUCTION

Online mentoring, also known as e-mentoring, telementoring, or cybermentoring, is the practice that allows mentors and mentees (the mentored) to communicate by using the Internet on a one-to-one basis. The reason for this activity could be to discuss problems related to one's job, family, school, work, or other issues. In general, mentoring can be categorized in two ways: (a) career mentoring which includes sponsorship, exposure and visibility, coaching, protection, or providing challenging work assignments; and (b) psychosocial mentoring which includes role-modeling, acceptance and confirmation, counseling, and friendship (Jandeska and Kraimer 2005). It has been suggested that online mentoring may now be replacing the traditional form of mentoring, that is, face-to-face mentoring, for many women professionals (Ridout 2006).

Traditional mentoring and online mentoring are practices currently being adopted by several professional organizations, such as the Society of Women Engineers, the Service Corps of Retired Executives (SCORE), the Women in Engineering Program Advocates Network (WEPAN), the United Nations Development Fund for Women (UNIFEM), and the International Telementor Program and universities, such as Northeastern University and the University of Vermont (Kasprisin, Single, Single, and Muller 2003). Sponsors of these formal mentoring programs provide access to professional

networks and some degree of traditional face-to-face mentoring in order to provide a nurturing and enduring relationship between a well-established professional and a more junior colleague (Ridout 2006).

Costs of online mentoring can include the sponsoring organization's expenses associated with the professional time of the mentor and of the information systems personnel, and costs of any computer equipment, software, and Internet set-up. The mentor also invests his or her personal time at home in securing a good relationship with the mentee (Boneva, Kraut, and Frohlich 2001; O'Neill, Wagner, and Gomez 1996). There are also costs to the mentee, possibly in terms of her personal and professional time and of her expenses associated with computer equipment and Internet setup.

The purpose of this study was to identify the factors that relate to or influence women entrepreneurs to accept online mentoring. If the factors that influence online mentoring adoption are known, then an organization which is interested in promoting entrepreneurship in women could use this information in order to better develop and implement formal mentoring programs. These factors should be studied because a lack of a mentoring relationship has been cited as one of the largest obstacles to women's progress in their careers (Vonk and Kestin 2007).

Demographic factors examined in this study included age, income, profession, and mentoring-related factors which pertained to how the mentee or potential mentee was being mentored, such as her number of mentors, her mode of mentoring, her preferred mentoring site, and her computer usage. This study also considered the attitudinal factors suggested by the Davis (Venkatesh and Davis 2000) technology acceptance model (TAM) or extensions thereof, and the Rogers (2003) diffusion of innovations theory. These attitudinal factors included the *perceived usefulness*, *perceived reliability*, *perceived risk* of the new technology, and the *ease of use* of the new technology.

LITERATURE REVIEW

No studies to date have been performed regarding acceptance factors for online mentoring adoption for either men or women. It should be pointed out that much of the recent literature pertaining to women entrepreneurs' adoption of online mentoring (as cited by Perren 2003) relates mostly to the effectiveness, as opposed to the acceptance, of the online mentoring programs for women entrepreneurs.

However, many studies have been performed recently pertaining to new technology acceptance. The theoretical model that has been used most frequently in these studies is the technology acceptance model (TAM), or some modified version of the TAM (Venkatesh and Davis 2000). The diffusion of innovations theory or DOIT (Rogers 2003) has also been utilized in a number of studies (e.g., Lichtenstein and Williamson 2006). These models suggest attitudinal factors, such as the perceived usefulness of the technology, the perceived risk, the compatibility with user values, and the ease of use of the technology.

RESEARCH METHODOLOGY

This study focused on the following research question: What are the factors that influence the acceptance of online mentoring by women entrepreneurs? Based on prior findings of the acceptance studies of online technology (Gibson 2007; Hogarth, Kolodinsky, and Gabor 2006; Kolodinsky, Hogarth, and Hilgert 2004) and of entrepreneurial attitudes (Peren 2003; Peterman and Kennedy 2003), the research hypotheses to be tested were as follows:

*H*₁: Younger women entrepreneurs would be more likely to accept online mentoring than older women entrepreneurs. .

*H*₂: Women entrepreneurs who had been mentored recently (in the past 12 months) were more likely to be accepting of online mentoring than those who had not been mentored recently.

*H*₃: Women entrepreneurs with exposure to organized online programs would be more likely to accept online mentoring than those who had no exposure to organized online programs.

*H*₄: Attitudinal factors suggested by TAM and DOIT would affect the acceptance of online mentoring by women entrepreneurs.

A quantitative approach which had been successful in previous U. S. studies (Gibson 2007; Hogarth, Kolodinsky, and Gabor 2006; Kolodinsky, Hogarth, and Hilgert 2004) was employed using a survey designed to assess the impact of both demographic and attitudinal factors on the acceptance of online technology. The results of this study are based on the data from the 2008 Gibson project which in 2007 surveyed 312 women professionals from seven different women's professional groups in Southwestern Pennsylvania. One of these groups was comprised of members of an entrepreneurship initiative group. All of the women's groups could choose whether they wished to complete a self-administered survey by either online or hard-copy method. The entrepreneurial group chose to complete the survey online.

The three dependent variables that addressed the research question were: (a) the likelihood to use online mentoring informally, (b) the likelihood to use online mentoring formally, that is, with the sponsorship of a company or organization, and (c) the importance of online mentoring to the mentee in choosing a sponsoring company or organization. This study provided for multiple values based upon a seven-point Likert scale response to the questions corresponding to the likelihood of online mentoring use and a five-point Likert scale to the response to the question corresponding to the importance of online mentoring use. The responses ranged from *definitely will not*, or *not important at all* (both coded as a "1") to *definitely will* ("7") or *most important* ("5").

Demographic and attitudinal factors were measured with the survey instrument developed by the Survey Research Center at the University of Michigan in 1999 and 2003 and used in subsequent online technology studies (Gibson 2007; Hogarth, Kolodinsky, and Gabor 2006; Kolodinsky, Hogarth, and Hilgert 2004). There were 16 independent demographic factors examined in this study. The

demographic variables included (a) seven standard demographic, such as income, age, and marital status, (b) four mentoring- related, such as the number of mentors at home or work, site, and (c) five Internet/PC-related, such as Internet access and connection. In addition, responses to 17 attitudinal statements and their relationships to the dependent variables were examined. One-way ANOVA followed by the Bonferroni procedure was used to test for relationships between the demographic variables and the dependent variables, and correlation analysis followed by stepwise multiple linear regression was used to test for the relationships between the attitudinal variables and the dependent variables.

RESULTS

Demographic data were collected from 115 participants who were members of a government-sponsored women entrepreneurship initiative. Approximately 80 percent of the group were Caucasian, 66 percent were married, 73 percent had annual household incomes of \$50,000 or more, 75 percent had a bachelor's degree or higher, and 65 percent were 45 years or older. Over 98 percent used the Internet more than once per day. None of the standard demographic factors investigated were significantly related to online mentoring acceptance. Thus, H_1 which proposed that younger women entrepreneurs would be more likely to accept online mentoring than older women entrepreneurs, was not supported.

H_2 stated that women entrepreneurs who had been mentored recently were more likely to accept online mentoring than those who had not been mentored recently. This hypothesis was supported, with the *recent use of online mentoring* being the only mentoring-related factor to be associated with all three dependent variables related to the acceptance of online mentoring. For women entrepreneurs who had been mentored recently versus those who had not been mentored recently, one-way ANOVA indicated that the mean scores associated with the *likelihood of formal use of online mentoring* ($M = 5.00$ versus $M = 3.70$), *the likelihood of informal use of online mentoring*

($M = 5.53$ versus $M = 3.81$), and the *importance of online mentoring use* ($M = 3.82$ versus $M = 3.12$) were all significantly higher, $F(1, 110) = 9.89$, $p < .01$, $F(1, 107) = 17.48$, $p < .001$, and $F(1, 111) = 5.66$, $p < .05$, respectively.

H_3 , which proposed that women entrepreneurs with exposure to organized online programs would be more likely to accept online mentoring than women entrepreneurs who had not had this exposure, was also supported. One-way ANOVA indicated that the mean scores associated with the *likelihood of formal use of mentoring* were significantly higher for women who had been participated in an organized online mentoring program recently than those who had no exposure to an organized online mentoring program. ($M = 5.69$ versus $M = 4.03$), $F(1, 51) = 10.44$, $p < .01$. An examination of this *actual usage* factor shows that women entrepreneurs who had been in a formal program for the past 12 months had a mean score of almost 5.7, indicating that they were “very likely” to consider being mentored online in a formal manner.

H_4 anticipated that the attitudinal factors suggested by TAM and DOIT would significantly influence the acceptance of online mentoring by women entrepreneurs. This hypothesis was supported by Pearson correlation analysis which showed that all 17 of the attitudinal statements had a statistically significant relationship with the dependent variables related to online mentoring acceptance.

The correlation analysis was taken a step further using a stepwise multiple linear regression. The six attitudinal statements that were the most significant in the multiple regression analysis were related to six factors suggested by TAM and DOIT. These attitudinal statements and the factors associated with these statements were as follows: (1) “I have the opportunity to be mentored online” (*trialability*), (2) “Being mentored online seems to be convenient” (*perceived ease of use*), (3) “I would feel comfortable providing information online” (*perceived risk/security*), (4) “Many people are mentored online” (*perceived reliability*), (5) “Online mentoring has so many advantages that I can use” (*perceived usefulness*), and (6) “I have seen how others are mentored online” (*observability*). Of these factors, *trialability* was the only factor associated with at least two of the dependent variables. For this

factor, 21% and 40% of the variance was explained from the stepwise multiple linear regression of this factor with the respective dependent variables, the likelihood of formal mentoring use and the likelihood of informal mentoring use.

TABLE 1
ATTITUDINAL PREDICTORS FROM REGRESSION ANALYSIS OF
ONLINE MENTORING ACCEPTANCE BY WOMEN ENTREPRENEURS

ATTITUDINAL STATEMENT / DEPENDENT VARIABLE	B	STANDARD ERROR	BETA
I have the opportunity to be mentored online./ Likelihood of Formal Mentoring Use $R^2 = .21; F(2, 94) = 12.21, p < .001$	.56	.14	.38
Likelihood of Informal Mentoring Use $R^2 = .40; F(3, 91) = 19.79, p < .001$	.36	.14	.25
I would feel comfortable providing information online./ Likelihood of Formal Mentoring Use $R^2 = .21; F(2, 94) = 12.21, p < .001$	.38	.17	.21
Being mentored online seems to be convenient./ Likelihood of Informal Mentoring Use $R^2 = .40; F(3, 91) = 19.79, p < .001$	.65	.21	.28
Many people are mentored online./ Likelihood of Informal Mentoring Use $R^2 = .40; F(3, 91) = 19.79, p < .001$	.61	.19	.30
Online mentoring has many advantages I can use./ Importance of Online Mentoring Use $R^2 = .19; F(2, 95) = 10.82, p < .001$	.30	.13	.23
I have seen how others are mentored online./ Importance of Online Mentoring Use $R^2 = .19; F(2, 95) = 10.82, p < .001$	.31	.10	.31

CONCLUSIONS AND IMPLICATIONS

Recent *actual usage* of online mentoring programs by women entrepreneurs was highly associated with the acceptance of online mentoring, and thus is an important consideration in the marketing of formal online mentoring programs. Recent actual usage was directly related to the *prior use of online technology*, a variable considered to be the most significant factor in previous studies of online technology (e.g., Gibson 2007). Prior use of online technology was also suggested as being an important factor in online mentoring studies (Johnson and Daire 2007).

This significance of this factor also suggests that the marketing of online mentoring to women entrepreneurs who had not participated in online mentoring will be considerably more difficult than to those women who had been mentored online. It is important to note that the most likely users of a formal online mentoring in the next year among this group are women who have been in a formal or organized online mentoring program in the past year. This is not surprising; however, it is important to note that these women entrepreneurs who are already satisfied with the program could promote it to other business women who have not been in a formal online mentoring program.

The findings pertaining to the attitudinal factors in this study were consistent with the theories and models developed as part of the TAM and DOIT. Four factors, *perceived usefulness*, *perceived ease of use*, *perceived risk/security*, and *perceived reliability*, were related to the TAM or a modified version of it. The other two factors, *trialability* and *observability*, were related to the model developed from DOIT. In particular, *trialability*, or the opportunity to try to be mentored online, was related to two of the three dependent variables related to online mentoring acceptance, indicating that this factor should be carefully considered in marketing online mentoring programs to women entrepreneurs.

In addition, *perceived risk/security* was a significant factor contributing to online mentoring acceptance by women entrepreneurs. The following reasons could explain the significance of this factor: (a) the women entrepreneurs' high comfort level with Internet use resulting from their

participation in online mentoring programs and (b) the women's dependence upon the Internet for other uses that may involve information which is highly private or confidential. The high comfort level with providing personal information online could be associated with the use of the Internet for providing confidential information for purposes such as applying for a small business loan.

A comparison of these significant attitudinal factors with previous studies produces mixed results. *Perceived usefulness*, *perceived risk/security*, and *perceived reliability* demonstrated significance in several technology acceptance studies (Gibson 2007; Hogarth, Kolodinsky, and Gabor 2006; Lee, Lee, and Eastwood 2003; Lichtenstein and Williamson 2006; Kolodinsky, Hogarth, and Hilgert 2004; Venkatesh and Davis 2000) and were suggested by online mentoring studies (Jandeska and Kraimer 2005; Knouse 2001; Miller and Griffiths 2005; Woodd 1999). *Perceived ease of use* also demonstrated significance in technology acceptance studies (Gibson 2007; Hogarth, et al. 2006; Kolodinsky, et al. 2004) and was also suggested as a factor in an online mentoring study by Woodd (1999). However, *trialability* demonstrated significance only in the studies by Gibson (2007) and Lee et al. (2003).

A successful implementation of online mentoring programs should also consider the attitudinal factors and statements that demonstrated statistical significance in this study. The significance of *perceived ease of use*, associated with the statement "Being mentored online seems to be convenient," suggests that the promotional material or website pages for online mentoring should emphasize that use of the technology will be free from effort. This can be particularly true for women who are mothers (Lichtenstein and Williamson 2006). In addition, the design of the online program should allow for (a) easy-to-use technology, such as a portable lap-top computer with high-speed Internet access and (b) a systematic matching of mentor and mentee in order to make the program more convenient for the user. In addition, usability studies would be beneficial to the implementation of the online mentoring programs.

Secondly, successful implementation should consider the *observability* and *trialability* of the online mentoring program so that potential users can observe other women professionals being mentored and experiment with the program on a limited basis. These factors can be addressed by first arranging for the potential mentee to observe other mentees communicating with their mentors. Later the potential mentee could be introduced to a temporary mentor and, along with this mentor, the mentee could participate in the online program for two to three weeks. After a few weeks, if the mentor and mentee agree that the program is beneficial, then the online mentor/mentee arrangement can become permanent. This service, which in a sense offers an introductory trial period for the mentee to test the program, could be emphasized on the website of the sponsoring organization or in its promotional materials.

REFERENCES

- Boneva, Bonka, Robert Kraut, and David Frohlich (2001). "Using E-Mail for Personal Relationships: The Difference Gender Makes," *The American Behavioral Scientist*, 45 (3), 530-549.
- Gibson, Lloyd G. (2007). "Internet Banking Adoption by Chinese Americans," D. Sc. dissertation. Robert Morris University, 1-76.
- Gibson, Regina. A. (2008). Factors Affecting the Acceptance of Online Mentoring by Women Professionals," D. Sc. dissertation. Robert Morris University, 1-162.
- Hogarth, Jeanne M., Jane M. Kolodinsky, and Tatiana Gabor (2006). "Consumer Payment Choices: Paper, Plastic – or Electrons?" *Consumer Interests Annual*, 52, 1-14.
- Jandeska, Kathryn E., and Maria L. Kraimer (2005). "Women's Perceptions of Organization Culture, Work Attitudes, and Role-Modeling Behavior," *Journal of Managerial Issues*, 17 (4), 461-478.
- Johnson, Nicola M., and Andrew P. Daire. (2007). "School Counselor Implementation of an Electronic Mentoring (E-Mentoring) Program in a Rural Setting. *Journal of Technology in Counseling*, 5 (1). <http://jtc.colstate.edu/Vol5_1/Johnson.htm>. Accessed on Jan. 20, 2008.
- Kasprisin, Christina A., Peg B. Single, Richard M. Single, and Carol B. Muller (2003). "Building a Better Bridge: Testing E-Training to Improve E-Mentoring Programmes in Higher Education," *Mentoring and Tutoring*, 11, 67-78.
- Knouse, Stephen B. (2001). "Virtual Mentors: Mentoring on the Internet," *Journal of Employment Counseling*, 38 (4), 162-169.
- Kolodinsky, Jane M., Jeanne M. Hogarth, and Marianne Hilgert (2004). "The Adoption of Electronic Banking Technologies by U.S. Consumers," *The International Journal of Bank Marketing*, 22 (4/5), 238-259.
- Lee, Eun-Ju., Jim Kook Lee, and David Eastwood (2003). "A Two-Step Estimation of Consumer Adoption of Technology-Based Service Innovations," *The Journal of Consumer Affairs*, 37 (2), 256-282.
- Lichtenstein, Sharman, and Kirsty Williamson (2006). "Understanding Consumer Adoption of Internet Banking: An Interpretive Study in the Australian Banking Context," *Journal of Electronic Commerce Research*, 7 (2), 50-66.
- Miller, Hugh, and Mark Griffiths (2005). "E-Mentoring," in *The Handbook of Youth Mentoring*. Ed. David L. Dubois and Michael J. Karcher. Thousand Oaks, CA: Sage Publications, Inc., 300-313.
- O'Neill, D. Kevin, Rory Wagner, and Louis M. Gomez (1996, November). "Online Mentors: Experimenting in Science Class," *Educational Leadership*, 54 (3), 39-42.
- Perren, Lew (2003). "The Role of E-Mentoring in Entrepreneurial Education and Support: A Meta-Review of Academic Literature," *Education & Training*, 45 (8/9), 517-525.

Peterman, Nicole E., and Jessica Kennedy (2003). "Enterprise Education: Influencing Students' Perception of Entrepreneurship," *Entrepreneurship Theory and Practice*, 28 (2), 129-144.

Ridout, Sandy (2006, January). "Mentoring: Guided by the Light," *PT*, 14 (1), 42-44, 46-48.

Rogers, Everett M. (2003). *Diffusion of Innovations* (5th ed.). New York, New York: Free Press.

Venkatesh, Viswanath, and Fred D. Davis (2000). "A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies," *Management Science*, 46 (2), 186-204.

Vonk, Nancy, and Janet Kestin (2007, April). "Notes from the Glass Ceiling: So Now What?" *Strategy*, 72.

Woodd, Maureen (1999). "The Challenges of Telementoring," *Journal of European Industrial Training*, 23 (3), 140-144.

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Critical life events in the life history of the female entrepreneur: Approach to setting up a theory of the effect of life events

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Although entrepreneurship research found that women and men differ in many ways little is known about life histories of female entrepreneurs. The analysis of 40 life history interviews with female entrepreneurs offered a surprising number of so called critical life events (CLEs) for 90% of the subjects. 40% referred the CLE explicitly to be the trigger for their founding intention. According to Gore & Colten (1991) the CLEs require the development of coping strategies. Furthermore a successful readjustment can improve the person's resilience in general. We assume a link between this successful readjustment and entrepreneurial activity/success for women.

Track: 1. Women, Ethnic Minority & Immigrant Entrepreneurship

The Impact of Cultural and Social Structural Differences on the Performance of Ventures Founded by Asian Americans

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We analyze the growth patterns and performance of firms founded by Asian Americans in Silicon Valley. Our analysis of 118 high technology firms indicates that companies founded by Asian Americans tend to have (1) comparatively longer times-to-IPO, and (2) significantly higher post-IPO share price gains. We also find that an infusion of venture capital finance into Asian American founded firms moderates these effects. Our results suggest that a comparative lack of early resources slows firm emergence and, further, that firms founded by Asian Americans may be undervalued prior to and at IPO.

Track: 1. Women, Ethnic Minority & Immigrant Entrepreneurship

Feasibility of Business Ownership by Educated Urban Women: A Developing Country Perspective

Authors:

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Abstract

The growing group of well educated, urban based women who have the potential of starting their own businesses as an economic option have been ignored by academic researchers or development planners in developing countries. In particular, there has been limited research on factors that affect the feasibility of women's entrepreneurship by this group of women in developing countries. This study fills this research gap and explores the factors affecting the feasibility of business-ownership by educated urban women in the society/culture of a developing country, represented by Bangladesh. Data were gathered from 75 women entrepreneurs. Findings demonstrate that years of formal education, work experience, socio-economic class, network and supporters, and the type of business are key explanatory factors determining the feasibility of business-ownership as an economic option for women. The findings have important implications for researchers and the policy makers.

Keywords: feasibility of business-ownership; women's entrepreneurship; middle-income educated urban women

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Abstract

The growing group of well educated, urban based women who have the potential of starting their own businesses as an economic option have been ignored by academic researchers or development planners in developing countries. In particular, there has been limited research on factors that affect the feasibility of women's entrepreneurship by this group of women in developing countries. This study fills this research gap and explores the factors affecting the feasibility of business-ownership by educated urban women in the society/culture of a developing country, represented by Bangladesh. Data were gathered from 75 women entrepreneurs. Findings demonstrate that years of formal education, work experience, socio-economic class, network and supporters, and the type of business are key explanatory factors determining the feasibility of business-ownership as an economic option for women. The findings have important implications for researchers and the policy makers.

Introduction

The growth of women's entrepreneurship since the 1970s has been one of the most significant, yet quietest revolutions of our time with women owning and managing up to one third of all businesses in developed countries (Riebe 2003; Nelton 1998). They are likely to play an even greater role when informal sectors are considered (Elaine, Langowitz, and Minniti 2006). In response to this world-wide growth of women's entrepreneurship, both academic and applied researchers have paid increased attention to women's businesses. For example, Carter, Anderson and Shaw (2001) identified over 400 academic references on the subject. Since 2004 Global Entrepreneurship Monitor (GEM) Reports on Women and Entrepreneurship has been providing cross-national assessment of women's entrepreneurial activities and highlighting the important role that women play in developing and developed economies.

The group of women who has attracted researchers' attention in high income or the developed economies is educated women, with access to resources and contact networks and

therefore in principle, capable of business start up (for example, Hisrich and Brush 1987; Goffee and Scase 1985; Carter and Cannon 1992; Mayoux 1995; Minniti, Arenius and Langowitz 2004). The main focus of research on women's entrepreneurial landscape in developing countries has, however, been poor women in rural areas and also urban slums, who are involved in micro scale necessity-based entrepreneurship. This has been largely driven by the significance of enterprise development by women in employment creation and economic growth in these countries - a testimony to which is the 'micro-credit' model for which Muhammad Yunus and his Grameen Bank in Bangladesh has been awarded the Nobel Peace Prize in 2006.

The growing group of well educated, urban based women in developing countries, who have the potential (in theory) of starting their own businesses as a career option have, however been untapped by academic researchers or development planners. Although the Global Entrepreneurship Monitor Reports (2004-2006) on women and entrepreneurship have reported on opportunity based entrepreneurship by women that is, who choose to start their own business as one of several desirable career options, in both developed and developing countries, the main issues of focus of these reports include motivations and types of women's entrepreneurial activities, socio-economic factors, behaviour and characteristics of women in early-stage entrepreneurial activity. There is still a significant gap in our knowledge of the factors that influence the perception of 'feasibility' of opportunity based entrepreneurship as a career option by women. The present study is an attempt to fill this void. It aims to explore if entrepreneurship/business-ownership is a feasible option for middle-income educated urban women in developing countries. More specifically, the study makes an effort to explore the factors affecting the feasibility of business-

ownership as a career option by educated urban women in the low-income/developing countries, represented by Bangladesh.

Overview of Women's Status in Bangladesh

Historically in Bangladesh, a broad gender division of labour exist in which men carries out the field-based agricultural work, being a predominantly agricultural economy, while women are responsible for activities carried out within the household. Basic social norms regard men as providers and women as carers and nurturers. Women's experiences, status, and roles are not uniform and tend to vary according to socio-economic status of a woman's family, the rural-urban setting, geographic region, and ethnic origin. Existing gender divisions are not so strongly applicable in many lower-income households owing to critical shifts at the national and international level, and in structures of family, kinship and production relationships (Nasreen 1995). Over the years, the accelerated reduction of land holding to non-viable units, the loss of land through indebtedness and forced sales, and growing impoverishment have transformed subsistence households into wage-based households (World Bank 1990). Consequently, family participation in income-producing activities has become imperative for the survival (Hossain, Jahan and Sobhan 1988). While declining economic standards have been one element in the broader climate of change in women's lives in Bangladesh, another has been the commitment professed by the state to the Millenium Development Goals (MDGs) and the Poverty Reduction Strategy Paper (PRSP) - where promoting gender equality and empowering women is one of the agendas of the broader pro-poor growth goal. The mushrooming of income generating projects, sponsored by the government and non-government organisations alike, have made available a new form of employment for women in rural areas. However, women in wealthier land-owning

households in rural areas are less likely to engage in outside productive work as this venture is seen as a sign of poverty and loss of social status.

The modernisation of society resulting in higher education and increased awareness among middle-income urban women, as well as the rising economic demands of households, have redefined traditional gender roles. An increasing proportion of women, although still low in absolute terms, are entering into formal occupations including teaching, professional, technical, administrative and managerial roles in both public and private sectors (UNDP, 2004; GOB, 2005). Educated urban women are also engaged in various sectors of business as well as in export oriented enterprises (Moyeen and Huq 1994).

Factors Affecting Feasibility of Women's Business-Ownership

Models or frameworks on entrepreneurial career choice that have come across in the last three decades demonstrate that the key factors influencing the perception of feasibility of starting a viable business venture are having the knowledge of how to start and manage a business, the technical and product knowledge (Vesper 1990; Box, White and Barr 1993; Awori 1995; Herron and Sapienza 1992), financial and other resources, networks, and support from family and friends (Brush 1990; Low and MacMillan 1988; Naffziger, Hornsby, and Kuratko 1994; Learned 1992). Another set of influences which form one's perception of the feasibility of company formation include the financial and non-financial support available from enterprise support agencies (Harper 1984; Manu 1988; Sarder 1995; Chrisman, Carsrud, DeCastro, and Herron 1990).

A common limitation of these models and frameworks which convincingly discussed entrepreneurial career precipitating events is that they took a gender neutral approach to the factors affecting business-ownership. For example, Scott and Twomey (1988) and Gibb and Ritchie (1982) looked at samples of graduates and would-be-entrepreneurs respectively, and neither of them stated whether their samples included both male and female or male respondents in particular. Hence, although significant differences in the orientations and motivations of male and female entrepreneurs were later identified (Brush 1992; Deakins and Whittam 2000; Fielden, Davidson, Dawe, and Makin 2003), the available models and frameworks, such as Greenberger and Sexton 1988; Learned 1992; and Herron and Sapienza 1992; Naffziger, Hornsby, and Kuratko 1994, are inadequate in highlighting the factors which specifically influence the feasibility of business-ownership by women. Furthermore, these models are also quite inadequate in providing useful explanations with respect to women's entrepreneurship outside the developed economies. Nonetheless, a review of existing literature indicates the following factors to be particularly relevant in influencing the feasibility of business-ownership by women.

Human Capital

Several studies on personal characteristics of women entrepreneurs reveal them to be better educated than the average populace (Gosselin and Grise 1990; Carter and Cannon 1992; Gazdar 1992; McClelland, Swail, Bell, and Patrick 2005). While it is generally agreed that formal education contributes positively towards the feasibility of business-ownership, several studies show that the area of education/subject of study influences the type of business chosen (Neider 1987; Honig-Haftel and Martin 1986; Scott 1986; Stevenson 1986). The social science and/or arts educational background typical of women business owners restrict or discourage

them from turning to start-up ventures in manufacturing, finance or technology (Birley, Moss, and Saunders 1987; Brush 1990). Educational background partly explains the high concentration of women-owned businesses in the OECD countries' service sectors (Brush 1990).

Although women entrepreneurs' choice of business was found to be associated with their previous work experience (Brindley and Ritchie 1999), no association was found between women's choice of business sectors and their previous experiences (Belcourt, Burke, and Lee-Gosselin 1990; Shabbir and Gregorio 1996).

Network, Resources and Supporters

Women entrepreneurs are embedded in different personal and social networks than men, as they are often excluded from both formal and informal networks of information (Cromie 1987; Gould and Parzen 1990). This presents a significant barrier, as research shows that strong ties in social networks facilitate the start-up process (Brush 1990; Davidsson and Honig 2003; Anderson, Park and Jack 2007). Women tend to have smaller networks, which may limit their access to low-cost facilities or transportation (Aldrich 1989). The infrequent use of sources of assistance by women entrepreneurs such as business associations and governments represents "*a lost opportunity to break through the isolation of the glass box*" (Belcourt, Burke and Lee-Gosselin 1990).

It is argued that women have difficulty in penetrating informal financial networks due to the lack of experience and skills (Hagen, Rivchun, and Sexton 1989; Hurley 1991). Financial institutions are also not always responsive to giving financial assistance to women, especially

when their business activity is new (Coleman 2000). Often women's capabilities are questioned and comparatively harsh guarantee terms are imposed (Buttner and Rosen 1992; Coleman and Carsky 1996; Still and Walker 2003). Carter and Rosa (1998) identify four financial areas where female (nascent) entrepreneurs might experience gender specific problems such as mobilising start-up capital, credit guarantees, investment capital and a possible discriminating attitude of bankers. Consequently, not only women most often start small by using only personal assets at start-up (Coleman and Carsky 1996) but continue to be very small or micro enterprise and are often under capitalised (Marlow and Carter 2004). However, there is evidence that women business owners tend to have many strong supporters (Olm, Carsrud and Alvey 1988; Smeltzer and Fann 1989). In particular, a spouse or significant other seems to be an important factor for successful women business owners (Nelson 1987; Rosa, Hamilton, Carter, and Burns 1994).

Based on the literature review, the following propositions are developed to gain an understanding of their influence on the perception of feasibility of business-ownership as a career option for women in developing countries.

A) Human Capital:

i) Years of formal education influences the perception of feasibility of women's business-ownership.

ii) The area of education influences the perception of feasibility of women's business-ownership.

iii) Previous employment experience influences the perception of feasibility of women's business-ownership

iv) Previous experience of working with/for an entrepreneur influences the perception of feasibility of business-ownership.

v) Having training in business skills influences the perception of feasibility of women's business-ownership.

B) Network, Resources and Supporters:

i) Having access to network/s influences the perception of feasibility of women's business-ownership.

ii) Having mentors/sponsors influences the perception of feasibility of women's business-ownership.

C) Spouse:

i) Having a supportive spouse influences the perception of feasibility of women's business-ownership.

D) Support Environment:

i) Availability of support from promotional agencies influences the perception of feasibility of women's business-ownership.

Methodology

Population and Sampling

The study has drawn its sample from Dhaka – the capital city, as it has the highest density of urban population, highest percentage of urban female population, and the largest number of middle-

income population. The middle-income educated urban women were defined as those who were between the age of 20 and 50 and had at least 12 years of formal education. Moreover, the monthly salary of the bread winner of these women's families ranged from Tk.10,000 to less than Tk.50,000 (US \$145 - less than US \$724). These three features are in line with the commonly cited demographic features of women entrepreneurs (Hisrich and Brush 1987; Carter and Cannon 1992; Stanger et al. 2002).

Data Collection

Personal interview using a largely open-ended interview schedule was employed to collect data from 75 women entrepreneurs. In the absence of any sizable population for random sampling, the "sample" of women business-owners was drawn through judgemental sampling method from client lists of the existing enterprise support agencies. This sampling method was also favoured as the purpose of this exploratory research was to investigate the wide spectrum of issues surrounding the perception of feasibility of business start-up, rather than obtain statistically significant findings (Douglas 2004).

The interview schedule was divided into five sections which mainly addressed the issues of personal and family details; business details; motivation for business start-up; managing process; pre and post start-up problems (both gender related and non-gender related); and views about women's business-ownership and its barriers (personal, economic, societal, institutional). Interviews were conducted with the women entrepreneurs either in their home or workplace at a time convenient to them. Most of the interviews were conducted in the local language *Bangla*, except for some who chose to give the interview in *English*. A *funnel sequence* of questions, that is, asking

more general questions before specific ones, was adopted to set the stage for *non-threatening* discussion including problems of business start-up, attitude of family and friends towards the respondent's business. Much attention was paid to ideas instead of words. On an average the interviews took between 180-200 minutes to complete. In some cases, the interviews were conducted on more than one visit. Where possible, informal talks with family members, personnel from support agencies were carried out to corroborate information provided from personal interview. In addition, direct observation was used during the interviews which included observing the structural condition of the premises and its equipment; the relationship between the respondent and her family members, her business partner/s (if any), and employees; and the respondent's personal feelings and attitude.

Data Analysis

The process of analysis consisted of three simultaneous stages viz.: within (sub) case analysis, cross case analysis and comparison of findings with existing theory. *Within case analysis* was guided by the conceptual framework and the interview schedule. As the analysis was carried out simultaneously with data gathering, it was also feasible to explore and probe the particular issues as they emerged (Hartley 1994) in order to understand the meanings the respondents attached to issues that were not structured in advance (Creswell 2003). This method eventually led to the identification of *key themes* (Miles and Huberman 1994) within each case through *pattern recognition* of how different issues and situations held different significance for different cases (Stoecker 1991). *Cross case analysis* was used to identify patterns of similarity and differences (Miles and Huberman 1994) in the cases. This was carried out in a manner which is similar to the

"case survey method" that incorporated scientific rigor to the study (Yin 2003). Finally data were compared with the existing theory that led to the investigation (Hartley 1994; Yin 2003).

Findings

Human Capital

Irrespective of the educational background the majority of the women entrepreneurs (67 percent) were concentrated in gender-role related businesses such as, boutique, bakery, florist, handicraft, fabric printing, dyeing and embroidery businesses. Majority of the women entrepreneurs (65 percent) were found to have previous work experience before setting-up their businesses of which 24 percent had previous experience of working with family-member entrepreneur/s. The previous work experience of the women entrepreneurs irrespective of the nature of job facilitated their business start-up process by strengthening either their management skills or their social network and ability to deal with people. A boutique owner and a handicraft and household-linen producer explained how their business start-up process was facilitated by their previous work experience:

“Even though my previous work experience as a teacher and as a secretary have no relation to my area of business, they facilitated the business start-up process primarily by increasing my level of confidence that I could be just as successful in business as I was in my jobs and secondly by enabling to build a strong network of friends. Moreover, as a secretary I learnt the art of communicating and dealing with people and managing day to day administrative responsibilities which have been of immeasurable help to me since the inception of the business”.

“I have learnt a lot about setting-up a business from my previous job. As an executive in my cousin's trading firm, I learnt how to maintain books of accounts, inventory, prepare project proposals, open L.C. with banks among others, which helped me in my business start-up. Besides I took some formal training on marketing, accounting and management before setting-up the business which strengthened my business skills”.

In line with the findings of earlier studies in developed countries that many women entrepreneurs had not worked in a related field before starting their ventures, majority of the entrepreneurs (69 percent) in this study were also found to have started their business in a field where they had no work experience. Half of these women (26 out of 52) were previously housewives with no work experience and the other half had experience in teaching and in secretarial positions. Moreover, more than half of the women entrepreneurs (52 percent) were found to have no formal/institutional training prior to business start-up. This may have been due to the fact that many of them had converted their hobby or home-making skills, for example, cooking, sewing, embroidery, gardening and so on, into home-based business.

Network, Resources and Supporters

An overwhelming majority of the women entrepreneurs (92 percent) obtained pre-start up financial support from their husband and family, used personal contact ("know who") or obtained support from family, husband and/or mentor to access resources as well as to promote their business. The great deal of support the women entrepreneurs obtained from their family and friends with regard to access to financial and physical resources and customers is not surprising perhaps because the majority of these entrepreneurs (60 percent) came from upper-middle income families with strong social networks and class connections. The role of social network

("know who") in promoting many of the women's businesses can be well described in the words of a floral gift shop-owner:

“My business partner's husband is the Managing Director of a large multinational company. It is his network through which the General Manager of Hotel Sheraton came to know about our business. One day, he came to see our shop and became very impressed with the floral gifts on display. Soon after that he gave us the contract to do flower arrangements for an international conference in the hotel. This put us in the lime-light over night and from then on we did not need to advertise our business any more”.

The importance of social networks was also highlighted by the owner of a Patisserie in the following words:

“Since my husband works for the air force many of his colleagues knows of my baking skills. But a couple of years back, when I received a phone call from the president's office asking me if I could bake a birthday cake for the president I realised how fast words go around.....naturally baking a cake for the president gave me so much publicity that I really did not need to advertise about my business any more”.

Although both the husband and the immediate family were found to be important supporters of the women entrepreneurs, the role of the husband (in some cases, father) were found to be frequently crucial in the business set-up and management process particularly in the non-traditional businesses. Very often, husbands played the role of the male chaperon or the aide for the entrepreneurs. This can be well described in the words of a ceramic factory owner:

“No matter what every woman in our society needs a man to support her to make her business a success. I don't know of any woman who could make a head-way in the tax office by herself”.

Moreover, in many cases, male members of the family, for example, husbands or fathers, in some cases were found to play a vital role in obtaining resources (financial and physical) and accessing information, market and customers. As two women entrepreneurs stated:

“My husband did all the initial ground work in setting-up this printing business. I even share the same office space with him. Although his own construction business keeps him very busy he is always there for me whenever I need him”.

“My husband does all the running around for my business (beauty salon). In other words, he takes care of all the outside activities relating to this business such as acquiring license, contracting suppliers, paying bills, and recruiting the male employees. He also maintains the books of accounts of my business”.

Finally, the husbands' co-operation at home and emotional support were found to be pivotal for successfully operating the businesses. The owner of a consulting firm captured the feelings of most women entrepreneurs who acknowledged the importance of having a co-operative husband.

“When I have to go out of town, my husband does a wonderful job in taking care of our daughter. Of course, as soon as I return she (the daughter) is entirely my responsibility. But when I really need it, his support is there for me”.

A poultry farm owner also added:

“I couldn't have done it without my husband's helpwhen I decided to set-up this business my father-in-law who is very religious and has very strong principles did not like the idea at all. But my husband reasoned with him. He told him this was something I had to do as it was necessary for the well-being of our family.....My husband also always helps me out in action, by taking sick chickens to the vet or by collecting chicks from various farms.....not only that, he is always encouraging me. He jokes that when my business becomes big, I should hire him as my manager”.

The Support Environment

Thirty-six women entrepreneurs (48 percent) had approached enterprise support agencies and only half of them had obtained finance, information and training support before setting-up their businesses. Among the other half, 17 percent received little/inadequate training, information, technical and marketing support and 33 percent received no support at all. Analysis of responses of women entrepreneurs with regard to the support environment in Bangladesh reveal that the personnel of the majority of the enterprise support agencies do not have women friendly attitude. However, the problem of non-cooperation of the personnel in the form of non-transmission of information, delays in processing documents for loan, and demands for *bribe* in government support agencies is not entirely a gender specific problem. These problems were also frequently mentioned by samples of male small business-owners in Bangladesh (Sarder 1995; Moyeen 1997).

The study reveals that while some women had consciously evaluated their perceptions of feasibility of business-ownership before setting-up the business, others went into business "unconsciously" or through the activities of their mentors/sponsors. These women did not actively evaluate the option rather when they had shown an interest their mentors/sponsors did the evaluation and helped them to start. For example, 8 women entrepreneurs who were involved in dairy farm, patisserie, coaching centre, garments factory, cotton indenting, printing business, and mushroom production respectively, did not become business-owners by consciously evaluating if it was feasible for them to start their own businesses. Rather, when they showed an interest in business-ownership, their husbands, fathers, or non-family mentors/sponsors converted their aspirations into reality by taking an active role in the business start-up process. As such, these women entrepreneurs had little involvement in the start-up phase of their businesses. In other words, they are in fact, operating businesses that had been set-up for them by their mentors/sponsors. For example, the husband of the owner of a famous patisserie was present when she was being interviewed. He answered the questions on behalf of his wife regarding the business start-up process as she knew little about how capital and other resources were obtained for setting-up the business. This suggests that although these women legally own the businesses and are managing them, their business-ownership is a result of their mentors' motivation rather than their own.

Overall, this study shows that years of formal education, work experience, socio-economic class, network and supporters, and the type of business are key explanatory factors determining the feasibility of business-ownership as an economic option for women in the context of Bangladesh. In other words, business-ownership is more feasible as an economic

option for women who have completed higher education, come from upper-middle income families with a strong social network and a supportive husband, and have had previous work experience.

Implications and Further Research Issues

Theoretical Implications

The present investigation highlights and confirms the often overlooked observation that women entrepreneurs in developing countries are not a homogenous group. With respect to the heterogeneity in women entrepreneurs' human capital, the study demonstrates variations in their level and type of work experience as well as their ability to access network, resources and supporters. This study indicates that certain factors that influence women's business-ownership in developed countries are also important for women's business-ownership in the developing economy context. For example, the cultural and social values, the various human capital elements, networks and supporters, and the support environment were also found to be important in influencing women's business-ownership. In addition, the role of spouse/husband was found to be particularly important in influencing the feasibility of business-ownership by Bangladeshi women.

The study contributes towards narrowing the gap in existing literature on women entrepreneurs running small and medium enterprises (SMEs) in developing countries. In particular, it highlights that *gender* plays a role not only in enabling or hindering women in starting their own business, but also in women's choice of business. This is in contrast to studies on women entrepreneurs in developed countries, which present inconclusive results about the

extent to which gender is an issue in women's business-ownership (see Pellegrino and Reece 1982; Carter and Cannon 1992; Kim and Gaskill 1995). Indeed, in light of the findings of this study, it may be argued that the factors affecting the feasibility of business-ownership by women are complex and highly interactive depending on women's individual social situations.

Whereas, the framework in this study has been developed for understanding factors influencing feasibility of business-ownership by women from the experience of entrepreneurs in Bangladesh, further research undertaking cross country comparisons of women's entrepreneurship in developing countries can refine this framework.

Finally, the findings of this study raise questions about how we define or who is "the woman entrepreneur". The study sample demonstrates great diversity with respect to the women's level of involvement in the business start-up process as well as the management and ownership of the business. Although almost all of the women entrepreneurs running traditionally female type and/or home-based businesses were actively involved in the start-up process and management of their businesses, many women in the non-traditional sectors were found to be "fronts" in their husband's businesses or operating a business actively set-up and guided by their husbands. This leads to a question, "to what extent are women in SMEs (particularly those in the non-traditional sectors) in developing countries actual 'entrepreneurs' rather than managers of businesses that are strongly supported by mentors/sponsors" for further research. Such diversity in women entrepreneurs' level of involvement in the start-up process and ownership of their businesses also questions the definition of a woman entrepreneur (Rosa and Hamilton 1994).

Hence, the whole concept of who or what constitutes "a woman entrepreneur" needs to be researched in more depth.

Policy Implications

The study suggests that there exists an enormous potential for entrepreneurship among middle-income educated urban women, who present an increasing group in most developing countries. In the face of shrinking adequate job opportunities around the world, business-ownership can offer a viable medium for effectively combining their economic and domestic roles, particularly for women in the more traditional societies. If policy makers are concerned with augmenting women's entrepreneurship in developing countries, policy initiatives should be taken at two levels. At the more general level, there is a need for policy and legislative initiatives that support and promote women's economic participation in general. However, policy and legislative measures alone can not bring about the needed change in the environment. Although these measures serve to provide institutional backing, real change can only come when there is a general awareness and consequent recognition of the important role that women can play in the socio-economic uplift of the society. In so doing, efforts should be made to encourage wide spread media exposure of role models, ideas for product and market development, and gender sensitization of the personnel of agencies working for entrepreneurship development. More importantly, policies and support services should carefully categorise women entrepreneurs and their needs in terms of their type of enterprises and the level of involvement in the ownership and management of their businesses, to be effective (Sarri and Trihopoulou 2005).

Methodological Implications

The study demonstrates that factors influencing or impeding women to set-up their own businesses may vary both within and between developing countries depending on women's personal backgrounds and the socio-economic context of the country. As such, factors which influence women's business-ownership in developed countries may not always be relevant for the same in developing countries. In order to explore such issues, the study demonstrates the importance of in-depth research and qualitative methods such as case studies in order to capture the details needed for understanding how and why certain factors are more important in influencing women's entrepreneurship than others.

Further research may focus on both existing women entrepreneurs and those who had aspired but failed to set-up or maintain own businesses, to demonstrate more conclusively the factors influencing feasibility of business-ownership by women. Future research may also focus on identifying distinct gender-related issues by including a sample of male entrepreneurs.

References

- Anderson, A., J. Park, and S. Jack (2007). "Entrepreneurial Social Capital: Conceptualizing Social Capital in New High-tech Firms", *International Small Business Journal* 25(3), 245-268.
- Awori, T. (1995). 'Training Issues: Women in Micro and Small-Scale Enterprises in Africa', in *Women in Micro-And-Small-Scale Enterprise Development*. Ed. L. Dignard, and J. Havet. London: IT Publications.
- Aldrich, H. (1989). "Networking among Women Entrepreneurs", in *Women Owned Businesses*. Ed. O. Hagen, C. Rivchun, and D. Sexton. New York: Praeger.
- Belcourt, M., Burke, R. J. & Lee-Gosselin, H. (1990) "The Glass-Box: Women Business Owners in Canada: Background Paper", in 'Factors Affecting Performance of Israeli Women Entrepreneurs: An Examination of Alternative Perspectives', *Frontiers of Entrepreneurship Research*. Eds. M. Lerner, C. Brush, and R. D. Hisrich, 1995, Babson College, Wellesley, MA. pp. 308-322.

- Birley, S., C. Moss, and P. Saunders (1987). "Do Women Entrepreneurs Require Different Training?", *American Journal of Small Business* 12 (1), 27-35.
- Brindley, C., and B. Ritchie (1999). "Female Entrepreneurship: Risk Perceptiveness, Opportunities and Challenges", paper presented at the 22nd ISBA National Small Firms Policy and Research Conference, Leeds, UK, November.
- Box, T. M., M. A. White, and S. H. Barr (1993). "A Contingency Model of New Manufacturing Firm Performance", *Entrepreneurship Theory and Practice* 18(2), 31-45.
- Brush, C. G. (1990). "Women and Enterprise Creation : Barriers and Opportunities", in *Enterprising Women: Local Initiatives for Job Creation*, Ed. S. Gould., and J. Parzen, Paris: OECD, 37-58.
- Brush, C. G. (1992). "Research on Women Business Owners: Past Trends, a New Perspective and Future Directions", *Entrepreneurship Theory and Practice* 16(4), 5-30.
- Buttner, H.E., and B. Rosen (1992). "Perception in the Loan Application Process: Male and Female Entrepreneurs' Perceptions and Subsequent Intentions", *Journal of Small Business Management* 30(1), 58-65.
- Carter, S., and T. Cannon (1992). *Women as Entrepreneurs*, London: Academic Press.
- Carter, S., and P. Rosa (1998). "The Financing of Male and Female Owned Businesses", *Entrepreneurship and Regional Development* 10(3), 203-24.
- Carter, S., S. Anderson, and E. Shaw (2001). "Women's Business Ownership: a Review of the Academic, Popular and Internet Literature" Report to the Small Business Service, Small Business Service, London, August.
- Chrisman, J., A. L. Carsrud, J. DeCastro, and L. Herron, (1990). "A Comparison of Assistance Needs of Male and Female Pre-Venture Entrepreneurs", *Journal of Business Venturing*, 5(4), 235-248.
- Coleman, S., and M. Carsky (1996). "Financing Small Business: Strategies Employed by Women Entrepreneurs", *The Journal of Applied Management and Entrepreneurship* 3(1), 28-42.
- Coleman, S. (2000). "Access to Capital and Terms of Credit: A Comparison of Men-and Women-owned Small Businesses", *Journal of Small Business Management* 38 (3), 37-52.
- Creswell, J. (2003). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, California: Sage Publications.

- Cromie, S. (1987). "Similarities and Differences Between Women and Men Who Choose Business Proprietorship", *International Small Business Journal* 5(3), 43-60.
- Davidsson, P., and B. Honig (2003). "The Role of Social and Human Capital amongst Nascent Entrepreneurs", *Journal of Business Venturing* 18(3), 301-31.
- Deakins, D., and G. Whittam (2000). "Business Start-up: Theory, Practice and Policy" in *Enterprise and Small Business: Principles, Practice and Policy*, Ed. S. Carter., and D. Jones-Evans, London: Financial Times Prentice-Hall.
- Douglas, D. (2004). "Entrepreneurship Research and Grounded Theory – Some Methodological Reflections" paper presented at the 3rd European Conference on Research Methods in Business and Management, Reading University, UK.
- Elaine, A., N. Langowitz, and M. Minniti (2006). "Global Entrepreneurship Monitor Report on Women and Entrepreneurship", Babson College and London Business School.
- Fielden, S.L., M. J. Davidson, A. J. Dawe, and P. J. Makin (2003). "Factors Inhibiting the Economic Growth of Female-owned Small Businesses in North West England", *Journal of Small Business and Enterprise Development* 10(2), 152-66.
- Gazdar, M. K. (1992). "Women Entrepreneurs in India: Their Status and Contribution", paper presented at the World Conference on Entrepreneurship, Singapore.
- Gibb, A. A., and J. Ritchie (1982). "Understanding the Process of Starting Small Business", *European Journal of Small Business* 1(1), 26-45.
- GOB (2005). *Statistical Year Book of Bangladesh*, Dhaka, Bangladesh: Bangladesh Bureau of Statistics.
- Goffee, R., and R. Scase (1985). *Women in Charge: The Experiences of Female Entrepreneurs*, London: George Allen and Unwin.
- Gould, S., and J. Parzen (1990). *Enterprising Women : Local initiatives For Job Creation*, Paris: OECD.
- Lee-Gosselin, H., and J. Grise (1990). "Are Women Owner-Managers Challenging Our Definitions of Entrepreneurship? an In-depth Survey", *Journal of Business Ethics* 9(4-5), 423-453.
- Greenberger, D. B., and D. L. Sexton (1988). "An Interactive Model of New Venture Initiation", *Journal of Small Business Management* 26(3), 1-7.
- Hagen, O., Rivchun, C. and Sexton, D. (1989). *Women Owned Businesses*, New York: Praeger.
- Harper, M. (1984). *Small Business in the Third World*, Chichester: Wiley and Sons,

- Hartley, J. F. (1994). "Case Studies in Organizational Research" in *Qualitative Methods in Organizational Research*, Ed. C. Cassell., and G. Symon, G, Sage.
- Herron, L., and H. J. Sapienza (1992). "The Entrepreneur and the Initiation of New Venture Launch Activities". *Entrepreneurship Theory and Practice*, 17(1), 49-55.
- Hisrich, R. D., and C. G. Brush (1987). "Women Entrepreneurs: A Longitudinal Study", *Frontiers of Entrepreneurship Research*, Wellesly, MA: Babson College, 187-189.
- Hossain, J., R. Jahan, and S. Sobhan (1988), "Industrialisation and Women Workers in Bangladesh: From Home Based Work to the Factories", in *Daughters in Industry: Work Skills and Consciousness of Women Workers in Asia*, Ed. N. Heyzer, Asian and Pacific Development Centre, Kuala Lumpur.
- Honig-Haftel, S., and L. Martin (1986). "Is the Female Entrepreneur at a Disadvantage?" *Thrust: The Journal for Employment and Training Professionals* 7, 49-64.
- Hurley, A. (1991). "Incorporating Feminist Theories into Sociological Theories of Entrepreneurship", paper presented at the Annual Academy of Management Meetings, Entrepreneurship Division, Miami, Florida, August.
- Kim, H-S., and L. R. Gaskill (1995). "Small Business Assistance Needs of Male and Female Retailers, A Comparative Analysis", *Entrepreneurship and Small Business in a Changing Competitive Environment*, Proceedings, 8-11 January, University of Colorado at Boulder.
- Learned, K. E. (1992). "What Happened Before Organization? A Model of Organization Formation", *Entrepreneurship Theory and Practice* 17(1), 39-48.
- Low, M. B., and I. C. MacMillan (1988). "Entrepreneurship: Past Research and Future Challenges", *Journal of Management*, 14(2), 139-161.
- Manu, G. B. (1988). "Extension Services for Small Scale Enterprise Development in Developing Countries: A Study with Particular Emphasis on Ghana". Ph. D. Thesis, University of Durham, UK.
- Marlow, S., and S. Carter (2004). "Accounting for Change: Professional Status, Gender Disadvantage and Self-employment", *Women in Management Review* 19(1), 5-17.
- Mayoux, L. (1995). "From Vicious to Virtuous Circles: Gender and Micro-Enterprise Development", Occasional Paper Series: 3, prepared for the Fourth World Conference on Women in Beijing, United Nations Research Institute for Social Development.
- McClelland, E., J. Swail, J. Bell, and I. Patrick (2005). "Following the Pathway of Female Entrepreneurs: A Six Country Investigation", *International Journal of Entrepreneurial Behaviour & Research* 11(2), 84-107.

- Minniti, M., P. Arenius, and N. Langowitz (2004). "Global Entrepreneurship Monitor Report on Women and Entrepreneurship" Babson College and London Business School.
- Miles, M. B. and A. M. Huberman (1994). *Qualitative Data Analysis: An Expanded Sourcebook*, Beverly Hills, California: Sage Publications.
- Moyeen, A., and Huq, A. (1994). "A Preliminary Investigation of Urban Female Entrepreneurs: A Study of Female Entrepreneurs of Dhaka Metropolitan Area", *Journal of Business Administration* 20(3 & 4), 233-41.
- Moyeen, A. (1997). "Strategic Planning and Strategic Awareness in Small Enterprises: A Study of Small Engineering Firms in Bangladesh", Ph.D. thesis, University of Stirling, UK.
- Nasreen, G. (1995). "Bangladeshi Women and the Politics of Religion", Office for Women's Research, University of Hawaii. Student Working Papers Series, I.
- Naffziger, D. W., J. S. Hornsby, and D. F. Kuratko (1994). "A Proposed Research Model of Entrepreneurial Motivation", *Entrepreneurship Theory and Practice*, 18(3), 29-42.
- Neider, L. (1987). "A Preliminary Investigation of Female Entrepreneurs in Florida", *Journal of Small Business Management*, 25(3), 22-29.
- Nelson, G. (1987). "Information Needs of Women Entrepreneurs", *Journal of Small Business Management*, 25(1), 38-44.
- Nelton, S. (1998), "Women's Firms Thrive", *Nation's Business*, 6(8), 38-40.
- Olm, K., A. Carsrud, and L. Alvey (1988), "The Role of Networks in New Venture Funding of Female Entrepreneurs: A Continuing Analysis", in *Frontiers of Entrepreneurship Research*. Eds. B. A. Kirchoff, W. A. Long, W. Ed. McMullan, K.H. Vesper, and W. E. Wetzel, Jr., Babson Park, MA: Babson College Press.
- Pellegrino, E. T., and B. L. Reece (1982). "Perceived Formative and Operational Problems Encountered by Female Entrepreneurs in Retail and Service Firms", *Journal of Small Business Management* 20(2), 15-24.
- Riebe, M. (2003). "Growth-oriented Women Entrepreneurs: Making it their Way", paper presented at the 48th International Council for Small Business World Conference, Belfast, 15-18 June.
- Rosa, P., D. Hamilton, S. Carter, and H. Burns (1994). "The Impact of Gender on Small Business Management: Preliminary Findings of a British Study", *International Small Business Journal* 12(3), 25-32.

- Rosa, P., and D. Hamilton (1994). "Gender and Ownership in UK Small Firms", *Entrepreneurship Theory and Practice* 18(3), 11-27.
- Sarri, K. and A. Trihopoulou (2005). "Female Entrepreneurs' Personal Characteristics and Motivation: A Review of the Greek Situation", *Women in Management Review* 20(1), 24-36.
- Sarder, J. H. (1995). "Small Enterprise Development in Bangladesh: A Study of the Nature and Effectiveness of Support Services", Ph. D. Thesis. University of Stirling, UK.
- Scott, M. G., and D. F. Twomey (1988). "The Long-Term Supply of Entrepreneurs : Students Career Aspirations in Relation to Entrepreneurship", *Journal of Small Business Management* 26(4), 5-13.
- Scott, C. E. (1986). "Why More Women Are Becoming Entrepreneurs", *Journal of Small Business Management* 24(4), 37-44.
- Shabbir, A., and S. Gregorio (1996). "An Examination of the Relationship between Women's Personal Goals and Structural Factors Influencing their Decision to Start a Business: The Case of Pakistan", *Journal of Business Venturing* 11(6), 507-529.
- Smeltzer, L. R., and G. L. Fann (1989). "Gender Differences in External Networks of Small Business Owners/Managers", *Journal of Small Business Management* 27(2), 25-32.
- Stanger, A., B. Roffey, D. M. Forsaith, C. F. Symes, M. Xydias, F. Petrone, and E. M. McInnes (2002). "Gender Differences in Small Business Owner-Managers", *International Journal of Entrepreneurship and Innovation* 3(2), 93-107.
- Stevenson, L. A. (1986). "Against All Odds: The Entrepreneurship of Women", *Journal of Small Business Management* 24(4), 30-36.
- Still, L.V., and E. A. Walker (2003). "Women's Business: a Changing Paradigm?", Research report prepared for Westpac Banking Corporation, Centre for Women and Business, The University of Western Australia.
- Stoecker, R. (1991). "Evaluating and Rethinking the Case Study". *The Sociological Review* 39(1), 88-112.
- UNDP (2004). *Human Development Report*, NY: UNDP.
- Vesper, K. H. (1990). *New Venture Strategies*, Englewood Cliffs, N. J.: Prentice Hall.
- World Bank. (1990). *Bangladesh: Strategies for Enhancing the Role of Women in Economic Development*, A World Bank Country Study, Washington: World Bank.
- Yin, R. K. (2003). *Case Study Research: Design and Methods*, Thousand Oaks, CA: Sage.

Will Credit Bureau Infrastructure Enhance Access to Finance for Small Business in Africa?

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ABSTRACT

Access to credit by African small businesses is a major challenge that needs to be frontally confronted if she is to attain rapid economic growth. This paper posits that credit bureaus can play significant role in facilitating access to finance for small businesses in Africa borrowing from the transformation such financial infrastructure has played in the developed world. It posits that credit bureaus or registries can actually stimulate access to credit and transform the economy of African nations. The paper concluded that there are challenges of unique identification, robust legislation and socio – cultural factors to overcome for credit bureaus to fulfill their traditional objectives as enablers.

BACKGROUND

Africa has the lowest financial penetration in the world. The share of the adult, bankable population having bank account is, on the average, under 20 per cent, with the exception of South Africa. Nigeria's rate of unbanked adult population as at 2007 was 74 per cent (Elfina, 2007). This shares similarity with Morocco's statistics of 20 per cent of adult population having access to financial services and Yemen's rate of 10 per cent (UNCTD, 2005). This phenomenon is also true of the rate of access to credit primarily measured by the ratio of private credit to the GDP. Africa's ratio of credit to the gross domestic product was put at 57 per cent as at 2007 compared with the world's average of 132 per cent (Agusto Report, 2007).

This means that a lot of Africans are excluded from access to financial services and much greater proportion suffers from access to credit. The most hard-hit are the small businesses; yet, access to credit is a fundamental pre-requisite for successful take off and smooth operations of small businesses. A critical factor confronting financial institutions in Africa is their inability to identify good borrowing customers.

A cursory look at the banks in Africa suggests that much as they would have loved to play their rightful place as the agent of financial intermediation, they confront series of challenges, especially servicing the deficit zone. The most significant of these is the fact that they do not, realistically, know who is a good customer and who is not; they are always afraid to give loans because they lack the wherewithal to determine the capacity and readiness for repayment by the prospective borrowers. In the developed world, this seems to have been resolved as the presence

of credit registries have assisted in mitigating this phenomenon. Clearly, Africa needs strong credit bureau infrastructure if she will achieve the level of aggregate lending required to stimulate economic growth and prosperity. This paper is an attempt to justify the need for establishing private credit bureaus in Africa.

A credit bureau or credit registry has been identified as a financial infrastructure capable of assisting in providing information about borrowers with a view to assisting lenders to take informed decisions. Evidence has been adduced to corroborate a positive correlation between presence of credit registries in an economy and access to finance. Small business and consumers are major beneficiaries of the credit bureau initiatives in terms of accessibility and fair risk asset pricing. African economies are beginning to promote the establishment of credit registries as a way to buoy access to funding for the small business.

This paper examined the effects of the presence of credit registries in an economy and concluded that there is indeed a positive correlation between presence of credit bureau and easing access to finance for small business. For Africa, the paper contented that with private credit bureau, African economies can begin to look at the next decade with optimism and an assurance that the small business will play their expected roles in poverty reduction, wealth creation and increase in GDP as they experience greater access to credit occasioned by the presence of credit bureaus. The paper concluded that there are challenges of unique identification, robust legislation and socio-cultural factors to overcome for these to be realized.

The paper is segmented into 5 parts. Section 1 is the introduction and provides a background to the presentation. Section 2 gives insights into the current level of access to credit in Africa. In Section 3, attempt is made at elucidating how credit bureaus can be used to deepen the financial system in Africa. In section 4, we articulate the challenges that should be overcome to enable Africa benefit from the robustness of credit bureaus. Section 5 is the conclusion with some recommendations.

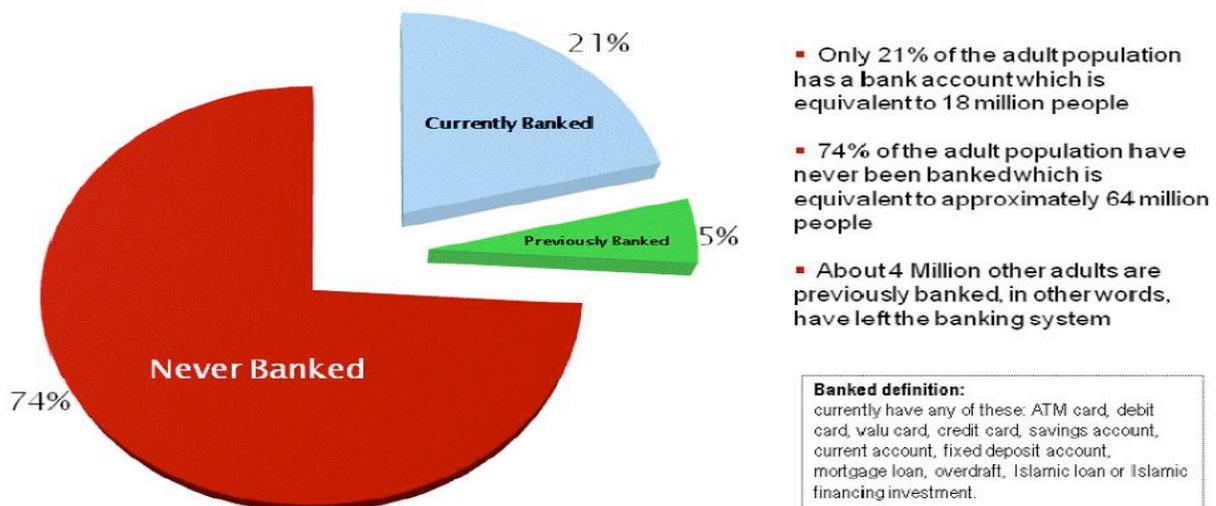
2. X-RAYING THE STATE OF ACCESS TO FINANCE IN AFRICA.

Access to credit is a fundamental pre-requisite for successful take-off and smooth operation of small businesses. Some research findings and literature have corroborated this assertion. As a matter of fact, funds are to a business what blood is to a living thing. It has also been asserted that with adequate and reasonable access to credit, small businesses would play their rightful place in the African economies as engine of growth and social transformation.

The rate of access to finance can be measured using various indices including, but not limited to, the proportion of adult population with bank accounts, the ratio of private credit to the GDP, the ratio of adult population with access to loans, etc. Although African economies have undergone some transformation at varied rates and speed, the verdict is that Africa has the least financial penetration among the continents of the world, using any of the known variables in the literature. While some have witnessed tremendous and radical transformation, some others have been slow.

It is therefore difficult to make generalizations that would be acceptable. Notwithstanding this phenomenon, a lot of works by various organizations including the World Bank and the International Finance Corporation have produced startling revelations.

A significant challenge for African countries is that only a small fraction of the bankable adult population and businesses have access to financial services. For example, in a report which was an outcome of a Finscope survey on access to finance in Nigeria, conducted by Enhancing Financial Innovation and Access (ELFina), it was revealed that about 74 per cent of Nigerian adults have never been banked and that only 24 per cent of adults have experienced financial services. The same report indicated that only 7 per cent of adults have loans with banks, non – governmental organisations or microfinance banks and about 53 per cent of this population plan to use the funds to start or expand a business. The level of financial shallowness witnessed in Nigeria is similar to what obtains in most other countries of Africa apart from South Africa where 60 per cent of the adult population have bank accounts.



Source: ELFina (www.efina.org.ng)

In another report published by Augusto & Co (2007), credit penetration continues to be low in Africa at 57 per cent of the Gross Domestic Product (GDP) compared with the world’s average of 132 per cent. In fact, Nigeria’s credit penetration was put at 12.3 per cent of GDP as at 2007. This is notwithstanding the fact that there has been a consistent growth in aggregate lending in the last two decades. The bank credit to the private sector to GDP ratio which was 13.7 percent between 1983-1987 moved to 21.6 per cent between 1993-97 and 29.8 per cent between 2000-04 before the sporadic growth to 57 per cent in 2007 (IMF, International Finance Statistics). Notwithstanding the seemingly appreciable progress, these figures have confirmed that the Sub-Saharan African countries’ financial sectors still ranked the least developed in the world.

Access to finance, which primarily has to do with loans or credit will improve only when, first of all, there is improvement in access to financial services. It follows therefore that a pragmatic solution to achieving improved access to finance should begin with making financial services

available and accessible to the adult population. Before now, access to financial services had been concentrated mostly through the formal banking system and the unorthodox money lenders.

Series of policy initiatives have been employed in the last two decades to accelerate financial sector growth in most of the African countries. Some of these policies include monetary policy implementation especially relating to interest and exchange rates, financial liberalization beginning with more powers to the central banks, commercial banks restructuring and consolidation to restore confidence and solvency as well as sectoral allocation of credits to favoured and preferred sectors especially manufacturing, small businesses and agriculture. Yet, all these have not given the much needed significant leap that can assure access to finance to households and small businesses.

The formal banking system has always focused on profitability and commercial returns as measurements of their performance. Consequently, their operations and outlets have been concentrated in the urban centres. In the case of Nigeria, government has made series of policies in the last three decades to change this scenario. It is important to mention the Rural Banking Policy where commercial banks were compelled to ensure that a percentage of their branch networks are in the rural areas. At another time, there was a credit allocation policy initiative compelling banks to give a minimum percentage of their total credit portfolio to specific sectors and industries including small and medium enterprises. But both schemes met with limited success as they were not in line with a market driven economic system.

Recently, African governments embraced the microfinance system as a veritable market and social tool to bring financial services to the larger segment of their unbanked adult population. This is aimed at promoting wealth creation, poverty alleviation and employment generation. The microfinance banking system emphasized the profitability of banking to the poor and sought to contrast the notion that providing banking solutions to the poor is at a loss because it is a social tool. Current trend in microfinance emphasized the fact that while high cost of credit is a legitimate concern, the poor, consumers and small businesses are more concerned about accessibility and availability of credit. Nigeria launched its Microfinance Policy in December 2005, and since then, the Central Bank of Nigeria has licensed about 800 microfinance banks. Before then, Nigeria had operated the community unit banking system with limited success. Many African countries, especially Kenya, Morocco, Ghana and South Africa have embraced the initiative of microfinance banking solutions as a way to deepen the financial system, bring banking to the poorest of the poor and enhance access to finance by the poor even using commercial terms. However, the full impact and effect on access to credit is too early to assess.

3. ACCESS TO FINANCE AND ROLE OF CREDIT BUREAU

McDonald and Schumacher (2007) highlighted the fear of non - performing and delinquent credits as the most significant reason for banks refusal to grant credit. This then presupposes that where banks have a high level of confidence that they will achieve loan repayment or that they could easily enforce contract in case of default, there is bound to be increase in access to credit.

Two significant propositions have been made therefore to excite the financial institutions to grant credit.

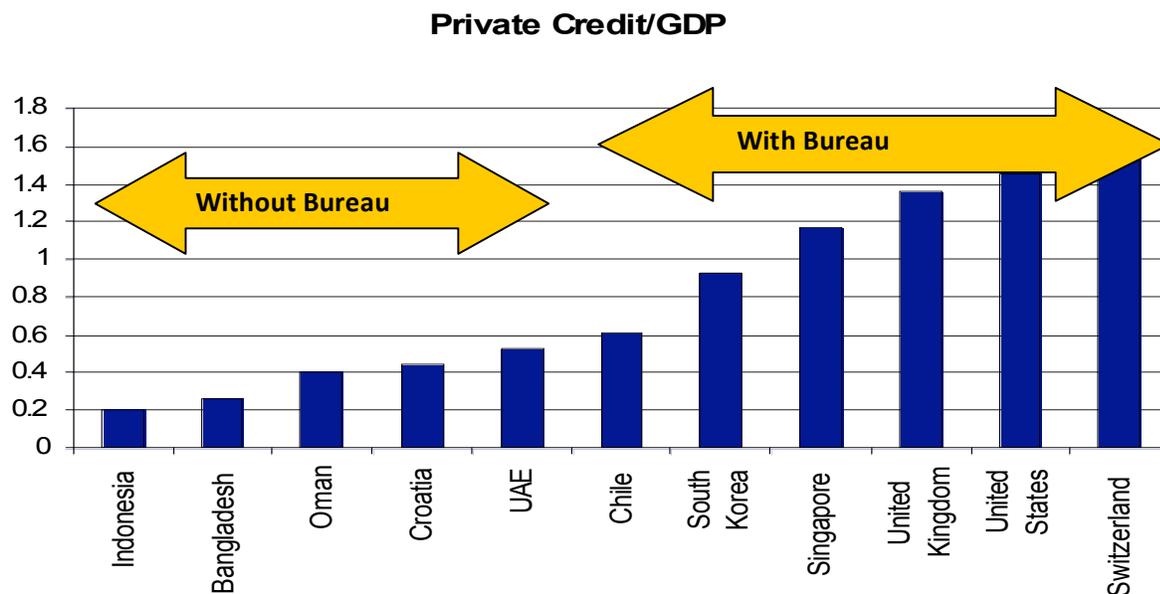
First, there is the need to introduce legislations that protect the right of creditors and enhance the quality of procedures that lead to repayment. This is the power theory of credit. It supports the establishment or the introduction of legislations, schemes, processes and or institutions that makes it easy to enforce payment or realize or seize collateral, in case of default.

Secondly, banks will increase the amount of credit to small businesses and consumers where they could better predict the payment probability by their potential borrowers. This information theory of credit asserts that “the more lenders know about the credit history of prospective borrowers, the deeper the credit markets would be” (McDonald and Schumacher, 2007). Credit bureau represents the practical step to actualize this.

The major and instant beneficiaries of credit bureau infrastructure in an economy are the consumers and small businesses, who ordinarily find it difficult to access bank loans and other forms of credit. Yet, micro, small and medium enterprises are very significant for the growth of the African economy, as it is in the other parts of the world with their specific contributions to employment generation, export earnings and adaptation of local technology, among others.

There have been factual statistics to support the positive relationship between the existence of credit bureau and the growth in access to finance as well as growth in productivity. Countries with private credit bureaus enjoyed higher financial penetration with higher private credit to the Gross Domestic Product (GDP) ratio.

The World Bank, in a study of 5,000 firms in 51 countries conducted in 2003 revealed that the percentage of small businesses reporting high financing constraints reduced from 49 per cent to 27 per cent with the introduction of credit bureaus. The same report confirmed that the probability of obtaining a bank loan for small firms increased from 28 per cent to 40 per cent with the introduction of credit bureau. In specific, in Ecuador, between 2002 and 2007, the number of micro entrepreneurs that obtained a loan increased from 60,000 to 719,000, representing 1,098 per cent increase over a 5 – year period.



Data Source: World Bank

Furthermore, it has been established that the poor do not have access to credit because they are regarded as unbankable and lack necessary collateral to back up their request. This phenomenon produces information asymmetries because the practical microfinance bankers to the poor have demonstrated that the poor value their name and integrity and that reputational collateral can be an effective tool to enhance access to credit. But reputational collateral requires access to repayment history which can only be given by a credit registry. Essentially, credit bureaus enhance reliance on reputational collateral than on physical collateral and therefore ease the chances of access to credit for small businesses with impeccable historical repayment records. Thus, by ameliorating information challenge on small businesses, credit bureau enables more entrepreneurs to obtain external finance thereby impacting positively on the poor.

4. CHALLENGES OF CREDIT BUREAU OPERATIONS IN AFRICA

The success or otherwise of a credit bureau is dependent on a number of factors. A bureau relies on a robust level of information technology infrastructure and software, adequate data availability, appropriate regulatory and legal framework, commercial viability and consumer education and awareness.

A credit bureau must be supported by relevant and appropriate software, technology and technical support and personnel. Such technology must be able to support large data base, efficient data management and information processing, adequate data security and flexibility of bureau members' legacy systems to adapt and conform to bureau requirements. It is also important for data to be available in the format that a bureau would be able to convert, merge and

match for its own use. Furthermore, a credit bureau is a specialized institution and requires special skills, competencies and a high level of integrity of personnel. These pose serious challenges in Africa where banks have been using various banking solutions and arranging their customer data in various ways to further meet regulatory and their own information requirements. In addition, Africa also faces a lot of challenge in the provision of infrastructure to aid business efficiency and cost reduction. In Nigeria, for example, electricity supply is still epileptic and telecommunications infrastructure, which is a major requirement for running uninterrupted bureau operations, are not at their optimum level of efficiency.

Closely related to the above is the quality of information and customer identification. Most African countries do not have unique identification such as social security number, national identity card, etc. The available sources of identification such as drivers' license or international passport are possessed by only a handful of the adult population. This is more so, when it is remembered that Africans bear similar names, spell the same name differently, do not have comprehensive and reliable demographic records such as birth register, death register, street addresses, etc. And because a lot of the work force is engaged in the informal sector, they also do not have documented and traceable workplace addresses. All these have implications for quality of data and identification, the scenarios that are unusual in the advanced countries.

Credit bureau also requires information sharing, consumer protection, and dispute resolution mechanisms. This implies that appropriate guidelines and legislations are required to safeguard the interest and confidentiality of the information of the consumers and protect the business of the credit bureaus too. These legislations are not available in most African countries.

The few African countries that are presently introducing credit bureaus have had to start with rudimentary legislation in form of general guidelines because the presence of credit bureaus has been more or less demand driven. In Nigeria, the Central Bank of Nigeria was mandated by Section 57 of the Central Bank Act (2007) to license and regulate the activities of credit bureaus. Consequently, the Central Bank in October 2008, released the "Guidelines for Licensing, Operations and Regulation of Credit Bureaus in Nigeria". This is the only law in force in Nigeria presently and may not be sufficient to assure efficient operations of credit bureaus in Nigeria.

The position in Morocco and Egypt are similar to the situation in Nigeria. In Morocco, the new banking law of 2006 empowers the Central Bank to be responsible for the management of a credit registry but can delegate its management under specific self defined conditions. In furtherance of this, the Central Bank had promoted a banking industry-owned credit bureau and issued several circulars in line with the powers conferred on it.

A credit bureau's success is also dependent on the quantum of data availability. In Africa, quite a large proportion of adult populations have no access to banking and financial services. In addition, quite a number of the countries have small population and very low financial penetration. When this is added to the challenges of infrastructure and unique identification, it becomes difficult to obtain commercial viability for private bureaus in a lot of the countries.

Illiteracy is high in Africa, and so is absence of financial education. In an atmosphere of low financial education, there is the need to provide robust financial awareness for the population which comes with its own associated cost. In the absence of adequate awareness about activities and impact of credit bureaus to access to finance, there has been reported misinformation about the involvement of credit bureaus in the credit process. In South Africa, there had been incidences of consumer protests and agitations blaming the credit bureaus for lenders refusal to grant credit facilities.

Furthermore, for an effective functioning and to make impact, a credit bureau requires large volume of data from as many sources as possible especially entities that are in lending business or sell their products and services for deferred receipts of revenue and from public sources. Most new bureaus commence only with data of borrowers. At the initial stage, these information and data are not always available because only a tiny proportion of the populations have had the opportunity to enjoy credit services in the past. In addition, the public utility that could have supported with historical records of payment of utility bills particularly for electricity, water and telephone do not have the capacity and the resources to produce these data. This phenomenon is further accentuated by the high level of informal nature of economic transactions with little records of documentation. The implication is that the response of African economies to the adoption of credit bureau may not produce the instant impact that have always been associated with the introduction of credit bureau in a typical advanced economies due to the limited information available.

5. CONCLUSIONS AND RECOMMENDATIONS

There is no alternative to deepening the financial system in Africa in order to promote economic growth and development and to assist in social transformation. But financial deepening will only be meaningful and impactful if it can lead to broadening access to financial services and credit especially for consumers and small businesses. A credit bureau is one of those financial infrastructures that must necessarily be in place to achieve these laudable objectives. However, a lot needs to be done to make this happen.

Appropriate laws and legislations are necessary conditions for success of credit bureaus. African countries must enact laws to protect consumer rights and bureau operators' activities. Comprehensive legislations have been in vogue in America and in India and a regulatory agency and comprehensive laws have also been introduced in South Africa. In Nigeria, the Central Bank issued a guideline in October 2008 for the licensing, operation and regulation of credit bureaus. A prominent provision in the guideline is a directive to all licensed credit bureaus to ensure that their members obtain formal consent to share their information with credit bureaus. This is in lieu of an enabling legislation. African countries introducing credit bureau must make the enactment of comprehensive legislation, a priority.

A suggestion to address the limitation posed by small markets is to introduce and allow hub and spoke systems with the hardware located in one country (hub) where all information is processed while other countries (spokes) have local offices for customer support which are connected to the

hub (Mylenko, 2008). A good existing example is the South Africa's TransUnion which also operates credit bureau services for Swaziland, Botswana and Namibia. Some West African countries can easily adopt this model.

African countries will also need to put in place a working and transparent unique identification scheme. The issuance of international passport, drivers' license or national identity card with all basic demographic information, facial component and biometric identity must be promoted. Without it, bureau operations will be visited with limited success. There is therefore the need to promote the national identity scheme where they are not available; where they are, such institutions must be strengthened, modernized and upgraded.

REFERENCES

1. Agosto & Co: Banking Industry Report (2007)
2. Dassouli, Maha: Setting up a Credit Reporting Infrastructure in an Emerging Market: the Moroccan Case Study; Paper presented at the 6th World Consumer Credit Reporting Conference, October 19 – 21(2008).
3. International Finance Corporation: Credit Bureau Knowledge Guide (2006).
4. Lenisa, Frank: Developing a Credit Bureau for Emerging Markets: Overcoming the Challenges in Africa; Paper presented at Third Global Credit Reporting Conference, October 21 – 23 (2008).
5. Levine, Ross: Finance and Growth: Theory and Evidence; Paper prepared for publication in the Handbook of Economic Growth (2004).
6. Mays, Elizabeth (Editor): Handbook of Credit Scoring. Glenlake Publishing Company Ltd (2001).
7. McDonald, Calvin and Schumacher, Liliana: Financial Deepening in Sub-Saharan Africa: Empirical Evidence on the Role of Creditor Rights Protection and Information Sharing. International Monetary Fund (IMF) Working Paper (2007).
8. Mylenko, Nataliya: Developing Credit Reporting in Africa: Opportunities and Challenges; Paper presented at the African Finance for the 21st Century High – Level Seminar organized by the International Monetary Fund (IMF) Institute in collaboration with the Joint Africa Institute, Tunis, Tunisia, March 4 – 5 (2008).

9. Rehbein, Maria Olga: Full File Reporting in Latin America; Paper presented at the 6th World Consumer Credit Reporting Conference, October 19 – 21 (2008).

10. United Nations Conference on Trade and Development (2005): Information Economy Report 2005.

11. Yunus Muhammed: Banker to the Poor: Micro-lending and its Battle against World Poverty. Public Affairs (2007)

**IS THERE A FINANCE GAP FOR SMEs?
SOME EVIDENCE FROM RECENT STUDIES IN SCOTLAND AND LONDON**

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ABSTRACT

The aim of this paper is to investigate whether or not there is still a finance gap for SMEs. The paper draws on evidence from two recent studies relating to accessing external finance by Scottish and London SMEs in order to assess the extent and nature of gaps in the market for SME finance. Both studies were concerned with obtaining demand and supply side perspectives using both primary and secondary data sources. The findings from both studies suggest that there continues to be specific gaps in the SME finance market and that these are most apparent for manufacturing SMEs, start-up and young firms, and businesses led by women and ethnic minority entrepreneurs. Given the present economic downturn, it seems that the impact of the credit crunch in the UK will exacerbate the funding gaps experienced by those types of SME that were already facing the greatest difficulties in raising external finance.

1. INTRODUCTION AND THEORETICAL CONTEXT

This paper contributes to the continuing debate about whether or not there is still a finance gap for SMEs, drawing upon two recent studies on SME access to finance within the United Kingdom. The first study was undertaken for the Scottish Government and focuses specifically on access to debt finance from banks (Scottish Government, 2008), whilst the second study was undertaken in 2008 for the London Development Agency and relates more generally to the extent to which London SMEs are experiencing problems in accessing finance from external sources. These studies have therefore been conducted in a Western European economy which is generally recognised as having a well developed financial infrastructure and venture capital/equity market compared to many transition and emerging economies.

Whether or not there is market failure relating to SMEs access to finance in the UK has been a much debated issue and the subject of several government investigations (notably the Macmillan Report of 1931 and the Wilson Committee in 1979) as well as a number of major research studies (e.g. Bank of England, 2004). As a result, various supply-side improvements have been made, for example, in the provision of advice and assistance to entrepreneurs and SME owner-managers including improved awareness of bankers' requirements, help with making propositions more fundable, initiatives by regional economic

development agencies on venture capital and loan finance and micro-credit schemes, and a greater emphasis by the commercial banks themselves on relationship banking. Moreover, the existence of the UK Government's Loan Guarantee Scheme since 1981 has been designed to address the problem that some firms with commercially viable business propositions are unable to provide the levels of security and collateral required by the banks. The announcement by the Bank of England that it was no longer going to produce an annual report on the finance of small firms after 2004 would suggest that the official view is that there is no market failure in the provision of bank (debt) finance to SMEs. Since then, little attention has been given to SMEs' access to debt finance. Instead, the focus of attention has tended to shift towards the existence of an equity gap rather than a debt gap; for example, the UK Government's former Small Business Service review of evidence on access to finance suggested that "small businesses find it difficult to obtain modest amounts of private equity finance" (SBS, 2005).

Financial market failure has been defined as "the failure of the financial markets to provide finance to apparently viable firms" (National Economic Research Associates, 1990). The emphasis here needs to be placed on **viable** firms, since it is a common finding of small business surveys that owner-managers who have been unsuccessful in obtaining finance will say that finance is a barrier to their growth, yet their failure to obtain finance may be because of weaknesses in the business case they are putting forward. Thus even when the market is working well, there are likely to be businesses with an unsatisfied demand for finance. For this reason, the notion of there being 'finance gaps' is arguably more helpful than that of 'market failure'. Moreover, as Storey (1994) observes, gaps can exist for understandable market reasons (such as the reluctance of small business owners to share ownership with finance providers or their unwillingness to pay high bank charges and/or interest rates). Market failure is also a difficult issue to prove conclusively, since judgements are required about the future viability of propositions and in the case of investment finance, trade offs made between the degree of risk that funding organisations are prepared to take and the size of potential rewards. The notion of 'market failure' also implies that this is an abnormal and temporary state of affairs, yet the contrary view is that markets are behaving imperfectly all the time, leading some commentators to suggest 'the failure of market failure' as a useful diagnostic tool for deciding on the need for policy intervention (Zerbe and McCurdy, 2005).

Much of the discussion relating to market failure has concentrated on two key aspects of the relationship between entrepreneurs and SME owner-managers on the one hand and finance providers on the other. In relation to bank lending, the focus has been on two aspects in particular namely, asymmetric information and reputational effects. Asymmetric information means that there will be some proposals on which bank officers will not have 'perfect' information. Stiglitz and Weiss (1981) classically argue that informational asymmetries considered under a basic theoretical analysis of conditions of imperfect information suggests that there will be insufficient credit available for all sound or 'bankable' propositions, suggesting the existence of credit gaps. Instances of market failure resulting from asymmetric information are thought to occur in relation to new and technology-based propositions for which market intelligence will be limited. At an early stage, information is limited and not always transparent (Hall et al, 2000; Schmid, 2001) and assets are often knowledge based exclusively associated with the founding entrepreneur (Hsu, 2004). Especially with manufacturing or technology based firms, entrepreneurs may be reluctant to provide full information about the opportunity because of concerns that disclosure may make it easier for others to exploit (Shane and Cable, 2002). In addition, there may be asymmetries arising from location as well as sector. For example, SME owners and entrepreneurs in rural environments may face difficulties with access to bank finance (OECD, 2008). This is supported by a study conducted by Felsenstein and Fleischer (2002) in which public assistance for small scale entrepreneurship in peripheral areas was analysed

and found that information asymmetries make peripheral firms unattractive to lenders. Although a consensus has emerged that asymmetries produce credit funding gaps, de Meza (2002) contends that over lending results from asymmetric information because entrepreneurs are over optimistic about their returns and consequently inflate their requirements in applications for funding to the banks.

Reputational effects apply, theoretically, where entrepreneurs are prevented by their own or others experiences from applying for debt finance. This provides a 'discouraged borrower effect' i.e. some entrepreneurs may not access finance because at some stage they are discouraged from applying (Kon and Storey, 2003; Fraser, 2005). This could be either that they think they will be unsuccessful so there is little point in applying or a perception that they will not have the information and good credit history that it is perceived that banks require. It may occur where entrepreneurs from certain groups distrust bankers, as for example can occur with ethnic minority business owners since they may perceive institutional bias in banking institutions. Other work has suggested that women seeking to start-up businesses may also form a category of discouraged borrowers (Roper and Scott, 2007). The extent of any discouraged borrower effect is unknown, but it may be important amongst ethnic immigrant groups. It has been suggested that banks with extensive and close relationships with some small firm communities may be able to overcome these reputational effects (Watanabe, 2005). The perception of a finance gap may reduce the willingness of entrepreneurs to approach the banking network to secure appropriate financing, resulting in some potentially viable business propositions not going ahead. A report for the former UK Government's Small Business Service (SBS) (Allinson, 2005 p.3) commented: "if people do not present themselves to a financial institution in the first place, because of self-selection and possibly underpinned by belief in a myth, then it may appear that the institutions' rates of granting loans are quite high – that they are meeting demand."

Overall, the relevant literature provides some consistent evidence to suggest that there are a number of categories of SMEs that could be affected by informational issues or reputational effects. Therefore, there may be finance gaps affecting certain categories of SME. This paper focuses on the extent to which four different types of SME faced problems:

- a) Young firms
- b) Manufacturing SMEs.
- c) Women-owned SMEs.
- d) Black and Minority Ethnic Businesses (BMEBs)

It will therefore consider the extent to which the evidence from the studies carried out in Scotland and London shows that these categories of SME have disproportionately faced problems in accessing external finance and whether this can be attributed to informational or reputation effects. Before focusing on the empirical findings, the next section of the paper summarises the research methodology employed in each of the studies.

2. RESEARCH METHODOLOGY

a) Scotland Study

A distinctive aspect of this study was that it adopted both a demand-side and supply-side perspective to the question of whether or not Scottish SMEs were experiencing difficulties in accessing external finance and bank finance in particular. The key question at the heart of the research was whether firms were experiencing difficulties because of the unsuitability of the business case they were putting to finance providers (i.e. demand side

issues), or whether the difficulties resulted from sub-optimal lending practices, resulting in some potentially viable proposals being rejected (i.e. supply side issues). The research consisted of a number of linked stages:

The first stage was to undertake analysis of the questions on access to finance in the 2006 Annual Small Business Survey (ASBS) (Scotland). This was based on a sample of 1014 surveyed SMEs, 29.2 per cent of whom had attempted to access external finance in the 12 months leading up to the survey, and 6.3 per cent (i.e. 64 SMEs) indicating problems in accessing finance. As well as information on various characteristics (e.g. age, sector, growth orientation) of the businesses, the ASBS survey provides data on the nature of the difficulties the businesses experienced, the type and amount of finance sought, and reasons for the difficulties.

The second stage consisted of a follow-up in-depth telephone interview survey of SME owner-managers that had indicated they had experienced problems in raising external finance as part of the ASBS (Scotland). These comprised businesses that: (i) obtained no finance; (ii) obtained less finance than they required; or (iii) obtained what they required but with some difficulty. This led to 51 completed interviews being undertaken in July-August 2007 of which 39 related to applications for bank finance. The telephone interview survey also acted as the basis for selecting a small number of test cases of firms that, prima facie, appeared to have put forward a strong business case for bank finance. Seven cases were developed that met the prima facie case. These cases provide instances of where a seemingly good business proposition had been rejected for debt finance or where the failure to obtain external finance had seriously curtailed the growth of the business.

The third stage focused on verification of the chosen seven case scenarios through the analysis of an independent banking expert. As a result of this verification stage, five cases providing a range of scenarios, size of business, turnover and credit requirements were eventually taken forward to the fourth stage which involved putting the cases before bank managers in order to investigate their procedures and criteria for evaluating business cases, using verbal protocol analysis. Interviews were held with eight bank lending officers. The purpose of the interviews was to obtain information on the processes decision-makers use in banks, how loan applications are dealt with and the main reasons for acceptance and referral.

b) London Study

The London study was concerned with establishing the type, size and scope of funding needed by London's SMEs and to determine the nature and extent of market failure issues including identifying any finance gaps. As with the Scotland study, it involved a number of stages including a series of demand-side and supply-side interviews.

The first stage was to undertake an analysis of the questions in the 2007 London Annual Business Survey (LABS) (undertaken by the London Development Agency) relating to accessing finance. This was a survey of 4527 businesses, 20 per cent of whom had approached external sources for finance in the 12 months prior to the survey, with 12 per cent reporting difficulties in accessing finance.

The second stage consisted of a number of demand-side interviews in order to obtain further insights into the nature and extent of the difficulties London SMEs are facing. These included interviews with 35 SME owner-managers that as part of LABS 2007 had identified problems in accessing finance. The interviews were able to go much further than the LABS survey in asking owner-managers about the nature of the finance sought, their experience of different sources, the reasons for the problems experienced, their views about alternative

external sources, and also their assessment of their future financial needs. In addition, a number of interviews were conducted with accountants and business advisors who dealt directly with SMEs about the financial needs and experiences of their clients.

The third stage comprised a series of face-to-face interviews with finance providers including bank managers, private venture capital organisations, representatives of business angel networks, and finance advisors. These interviews asked about the decision-making processes and protocols used in making loan and investment decisions to SMEs, the main reasons for acceptance and referral, and their views on whether gaps existed for certain types of finance and if so, the principal causes for them.

For both the Scotland and London studies, a strong research team was recruited with previous experience of researching SME finance and interviewing specialist funders and bankers. All the authors were directly involved in the interviews for both studies. Consistency was applied with flexibility to minimise bias whilst retaining the scope for respondents to have full freedom to provide extensive views and interview data.

3. FINDINGS AND DISCUSSION

We now examine the evidence from the Scotland and London studies relating to the four categories of SME identified above to see to what extent they have been experiencing a higher incidence of difficulties in accessing finance than SMEs in general and if so, whether this can be explained at least in part by information asymmetry and reputational effects. The findings will be discussed in the context of the literature and other research relating to access to finance for each type of SME.

3.1 Younger SMEs and Entrepreneurs

There is clear evidence from the study of Scottish SMEs that a disproportionate number of younger SMEs were facing difficulties in accessing external finance. As Table 1 shows, there were important differences between firms trading for less than four years and their older, more established counterparts. Whilst younger firms exhibited a greater propensity to try to access finance, they were also more likely to encounter problems in accessing it, with 17.1 per cent of them not receiving any finance (Table 2). The age of the business proved particularly significant when applying for bank finance, since 13.5 per cent of early stage businesses experienced problems compared with just 2.5 per cent of more established SMEs (Table 1). Further analysis reveals that young firms were twice as likely as more established SMEs to require finance to buy premises and for staff development, whilst their main reason for requiring finance was for working capital.

As mentioned above, it has been argued that information asymmetry is particularly acute in younger SMEs and therefore a key part of the explanation as to why they have more difficulty than established SMEs in accessing finance. At this early stage information is limited and not always transparent so that finance providers are more wary of lending because of the greater uncertainty involved. Whereas within established businesses information is more efficiently transferred by, for example, an established track record and product branding, mechanisms not readily available to business start-ups. It is argued therefore that new and early stage SMEs possess a considerable informational advantage about the businesses vis-a-vis finance providers. Additionally, entrepreneurs seeking funding have an incentive to emphasise the strengths in a business proposal and to keep hidden what they know to be any flaws (de Meza, 2002). On the other hand, there is an

opposing line of argument that suggests that finance providers are likely to have a better idea of whether a new business is likely to be successful than the entrepreneur starting the business because of the experience they have derived from dealing with previous business proposals in similar sectors (Storey, 1994).

Table 1: Comparison between new and older firms' access to finance in Scotland

During the previous year:	<4 years		4+ years		Total	
	Number	%	Number	%	Number	%
Tried to access finance	35	39.4*	261	28.4	296	29.4
Problems accessing finance	15	16.9**	55	6.0	70	6.9
Bank finance sought	29	32.6*	161	17.5	190	18.9
Problems accessing bank finance	12	13.5**	23	2.5	35	3.5
Total	89	100	920	100	1009	100

Note: * significant at beyond .05 level
 ** significant at beyond .01 level
 Source: ASBS (Scotland) 2006

Table 2: Problems of accessing finance by age of firm in Scotland

During the previous year:	<4 years		4+ years		Total	
	Number	%	Number	%	Number	%
No funding received	6	17.1	28	10.7	34	11.5
Some funding received	5	14.3	13	5.0	18	6.1
Problems, but all funding received	4	11.4	14	5.4	18	6.1
Total problems	15	42.8	55	21.1	70	29.7
Total Seeking Finance	35	100.0	261	100.0	296	100.0

Source: ASBS (Scotland) 2006

There is relatively little support for the information asymmetry argument relating to young firms from the Scotland study. From the perspective of entrepreneurs themselves, the main reason why start-up and early stage businesses have problems in accessing external finance is the absence of a track record, combined with the difficulty of raising the level of collateral and personal security required by lenders. This makes it especially difficult for this group of SMEs and owners to raise external finance. Since most banks segment the SME market either by size of turnover or by the size of funding proposals, the treatment of

applications from micro and small firms tends to rely more heavily on credit scoring methods than those from larger firms where there is a greater element of bank manager discretion and flexibility. This can place younger SMEs at a disadvantage, especially where there is a lack of credit history and trading track record.

Further evidence relating specifically to young entrepreneurs starting businesses in Scotland comes from the Princes Scottish Youth Business Trust (PSYBT), a national agency that supports entrepreneurs through advice and some limited loan and grant finance. This showed that very few (about 5 per cent) young entrepreneurs succeed in getting any support from commercial banks. Moreover, the PSYBT found that perceived difficulties in accessing finance were also found to be responsible for the finance gap among this group of entrepreneurs since 70 per cent of young entrepreneurs did not try to get funding from another source before approaching PSYBT, even though 61 per cent of them knew of other ways to secure finance. The reason given was a belief that they would be unlikely to obtain the necessary funds so there was little point in trying (Scottish Enterprise, 2007). This is an indication therefore of a strong 'discouraged borrower effect' amongst young entrepreneurs.

3.2 Manufacturing SMEs

A striking finding of both the Scotland and London studies is that manufacturing SMEs were more likely to experience problems in accessing finance than SMEs in other sectors. In the case of the Scottish evidence, manufacturing SMEs experienced particular problems accessing bank finance. As Table 3 shows, whereas manufacturing SMEs represented 19 per cent of SMEs taking part in the ASBS (Scotland), they comprised 46 per cent of those reporting problems accessing bank finance. Manufacturing SMEs were twice as likely to experience problems compared with SMEs in other sectors. The Scottish manufacturing SMEs were typically seeking external finance for new product and market development, upgrading plant and machinery, and in a few cases to finance acquisitions. The owner-managers of manufacturing SMEs frequently criticised the banks for being risk averse and bank lending officers for lacking the necessary sectoral and technical knowledge, indicating that information asymmetry can be an issue in the case of some more specialist manufacturing SMEs.

These findings are largely confirmed by the London study. Manufacturing SMEs were significantly more likely to approach external sources for finance in the 12 months prior to the 2007 London Annual Business Survey (LABS) than businesses in other sectors (35 per cent of all manufacturing businesses compared to 20 per cent of all businesses) (Table 4). At the same time, manufacturing SMEs were also more likely to report problems in accessing finance, with 29 per cent of them identifying a problem compared with 12 per cent of all businesses. Furthermore, manufacturing SMEs were more likely to indicate that the difficulties in accessing finance had been a constraint on investment in the previous 12 months. Manufacturing SMEs were generally looking for larger amounts of finance (a median of £70,000 compared with £45,000 across all sectors) and, as the following examples illustrate, encountered difficulties because of there being insufficient equity in the business or other forms of collateral. For example, the owner-manager of a company manufacturing cleaning materials needed £500,000 for investment including extending their premises, but was turned down by the bank because of insufficient collateral. Similarly, the owner of a petrochemicals company that traded internationally required £350,000 to purchase new equipment and to develop new product lines, but was also turned down by the bank because there was insufficient equity in the business to guarantee the loan.

Table 3: Problems accessing bank finance by sector amongst Scottish SMEs

	SMEs reporting difficulties with bank finance		ASBS (Scotland) 2006	
	Number	%	Number	%
Primary	1	3	48	5
Manufacturing	18	46	187	19
Retail & Wholesale	7	18	288	28
Hotel & Catering	8	21	168	17
Professional Services	4	10	124	12
Education	1	3	5	0.5
Other sectors	0	0	194	19
Total	39	100.0	1014	100.0

Source: ASBS (Scotland) 2006

Table 4: Proportion of London Businesses accessing external finance by sector

	Number	Percentage approaching external sources	Percentage experiencing problems
Manufacturing	332	35%	29%
Construction	378	22%	14%
Wholesale & retail	894	18%	12%
Hotels & restaurants	502	16%	9%
Transport & communication	301	19%	16%
Banking & finance	280	24%	19%
Business & professional services	1136	19%	11%
Other	704	22%	11%
All businesses	4527	20%	12%

Source: London Annual Business Survey 2007

These findings from the Scotland and London studies are consistent with other recent research evidence relating to the UK. For example, a UK wide survey of financing of SMEs (CBR 2008) found that firstly there was an increasing demand from manufacturing SMEs for external finance which ran counter to that of SMEs in other sectors and that secondly manufacturing SMEs were less likely to be successful than their counterparts in other sectors.

Although only a small minority of SMEs in both the Scotland and London studies had been seeking equity or venture capital finance (2.7 per cent in Scotland and 3 per cent in London of those applying for external finance), there is some indication from both studies that there is a gap relating to smaller amounts of equity finance and that this was most likely to affect high growth SMEs in manufacturing. Thus interviewed venture capital fund managers in the London study thought there was an equity gap extending up to investments in the £2–3 million range as a result of institutionally backed private sector venture capital funds having moved ‘up market’ to above £2 million or higher. This problem is illustrated by one of the interviewed London SMEs, a fast growing publishing consumer magazine company, which was seeking £500,000 of venture capital to finance an innovation that would take the brand into the digital arena as well as the acquisition of another company. The owner indicated that they were unable to attract venture capital finance because the amount they were seeking was too small compared to the venture capital firms minimum threshold of £2 million.

3.3 Women owned SMEs

Both the Scotland and London studies provide evidence to indicate that female entrepreneurs are more likely to experience difficulties in accessing external finance than their male counterparts. Also, the studies indicate that much of this can be attributed to certain perceived difficulties resulting in them being discouraged from applying to external sources, particularly the banks.

The Scottish study shows that businesses where women were the majority owners were more likely (significant at beyond the 0.01 level) to identify problems in accessing finance than their male owned counterparts, including problems in accessing bank finance (Table 5). In fact, a markedly higher proportion (43 per cent) of those firms encountering problems accessing bank finance were majority women owned compared with those having problems with other finance sources (14 per cent).

Table 5: Comparison between men and women owned firms’ Access to Finance in Scotland

During the previous year	Women		Men		Total	
	Number	%	Number	%	Number	%
Tried to access finance	46	26.4	245	30.6	291	29.8
Problems accessing finance	20	11.5**	49	6.1	69	7.1
Bank finance sought	30	17.3	158	19.7	188	19.3
Problems accessing bank finance	15	8.6*	20	2.5	35	3.6
Total	174	100.0	801	100.0	975	100.0

Note: * significant at beyond .05 level

** significant at beyond .01 level

Source: ASBS (Scotland) 2006

In the London study, businesses that were majority owned by women were less likely to approach external sources for investment over the 12 months prior to the survey (14% compared with 23% of majority male and 50:50 male/female owned) (Table 6). They were

less likely to approach banks than their majority male owned counterparts (65% of those approaching external sources compared with 75%). However, they were significantly more likely to approach loan funds (11% compared to 3%) and grants (4% compared to 1%).

Table 6: Proportion of London businesses accessing external finance by gender of ownership

	Number	Percentage approaching external sources	Percentage experiencing problems
Majority female	463	14%	9%
50:50 Male/female	617	23%	14%
Majority male	2384	23%	14%
All businesses	4527	20%	12%

Note: 1063 businesses did not provide gender data

Source: London Annual Business Survey 2007

In terms of the nature of the access to finance problems that they identified, the most common difficulties identified by women owned businesses were: (i) a lack of advice about options/finance sources available (45% of those experiencing problems); (ii) a lack of asset collateral to guarantee loans (41%); and (iii) lending organisations not understanding the needs of the business (41%). Interestingly, a greater proportion of majority owned female businesses identified lack of advice as a problem compared with majority male owned businesses (45% compared with 35%).

As to reasons for not applying for external finance, majority female owned businesses were much more likely to feel that they would be turned down if they applied for finance because they were not profitable enough compared with their majority male counterparts (32% compared to 9%). They were also more likely to think that their poor credit history would be a factor (16% compared with 5%).

This evidence is largely consistent with what other researchers have said about women entrepreneurs being more likely to be discouraged borrowers than men (Roper and Scott, 2007). For example, a large UK wide survey of SME financial needs found that female-led businesses were more likely to feel discouraged or reluctant to approach external sources (CBR, 2008). A study of potential entrepreneurs found that they are more likely to be pessimistic than men in raising money to start business (Allinson et al., 2005) whilst Marlow and Carter (2006) found that debt aversion was constraining many women from starting businesses. Women have been found to encounter credibility problems when dealing with banks as well as lacking knowledge of available sources of finance and how to go about accessing them (Carter et al., 2001). They have also been found to be concerned about the extent to which bank lending officers are even-handed in their treatment of clients (Wilson et al., 2007). Browne et al. (2004) suggest that female entrepreneurs are also handicapped by their lack of experience in business and financial services, many of them having had careers in marketing and human resources previously.

However, these 'reputational effects' are only part of the explanation for the difficulties that women entrepreneurs face as it has been suggested that it also reflects the nature of the businesses that many women run. They tend to operate businesses which are low tech micro enterprises in the personal service sectors, located in crowded sectors with limited growth potential, operated on part-time basis, and having low equity (Marlow and Watson, 2006). For these reasons many women-led businesses have less need of accessing external finance. The financial guarantees required for external financing may be beyond

the scope of most women's personal assets and credit track record (Carter et al, 2001).

3.4 Black and minority ethnic businesses (BMEBs)

There is clear evidence from the London study that some of the greatest difficulties in accessing external finance are experienced by BMEBs, and particularly those owned by Black African and Caribbean entrepreneurs. First, the LABS 2007 data indicates that BMEBs had a greater need of external finance than White owned businesses since a significantly higher proportion of Black and Asian owned businesses (44 per cent and 30 per cent respectively) approached external sources for investment and other finance in the 12 months prior to the survey compared to White owned businesses (19 per cent) (Table 7) Second, a higher proportion of Black owned businesses seeking external funding approached banks for finance (87 per cent of them) compared to White owned (72 per cent) and Asian owned businesses (74 per cent). However, although a greater proportion of BMEBs approached banks for finance, they were significantly more likely to have their applications rejected. Whilst 74 per cent of White owned businesses were successful in obtaining bank finance, this compared with just 29 per cent of Black owned business and 57 per cent of Asian owned businesses.

And third, given their lower success in applying for debt finance, there can be little surprise that BMEBs were also more likely to report problems in accessing external finance than their White counterparts (Table 7). Thirty-two per cent of Black owned businesses reported having problems compared to 21 per cent of Asian owned businesses and 11 per cent of White owned businesses. Further analysis revealed that Black owned businesses were much more likely to consider access to finance as an issue posing a major problem to the business (27 per cent of Black businesses compared to 7 per cent of White owned businesses and 11 per cent of Asian owned businesses). According to the surveyed owner-managers themselves, the main problems that Black owned businesses experienced in accessing external finance in the 12 months prior to the study related to lack of asset collateral to guarantee a loan (65 per cent of those businesses experiencing problems), lending organisations not understanding the needs of the business (63 per cent) and not being able to obtain a large enough amount of funding (60 per cent).

Table 7: Proportion of London businesses accessing external finance by ethnic group of ownership

	Number	Percentage approaching external sources	Percentage experiencing problems
White	2918	19%	11%
Black	138	44%	32%
Asian	405	30%	21%
Other	134	18%	12%
All businesses	4527	20%	12%

Note: 932 businesses did not provide ethnicity data
Source: London Annual Business Survey 2007

These findings are consistent with the evidence from a major UK wide survey that found that the proportion of BMEBs reporting difficulties in obtaining finance from their first source was twice that of non-BME businesses, with Afro-Caribbean owned businesses

facing a significantly higher rate of rejection (Fraser, 2005). Fraser's analysis concluded that these differences were explained by risk factors (e.g. their lack of credit worthiness) and financial relationships (e.g. higher rates of missed debt repayments and unauthorised overdraft borrowing) rather than ethnic discrimination.

However, other studies have suggested that there is perceived discrimination amongst BME entrepreneurs. For example, a study of the business issues and support needs of African and Caribbean business owners in London revealed that many of the interviewed owner managers had a perception of negative stereotyping by bank managers (CEEDR 2000). This is supported by evidence from Scotland where perceived institutional discrimination appeared to be a factor leading to reluctance on the part of BME entrepreneurs to approach external sources of finance (Deakins et al., 2005). In addition, the move towards centralised decision-making in some banks could militate against building good relationships with BMEBs. It has also been suggested that the tendency for BME businesses to be concentrated in deprived areas contributes to their difficulties in accessing finance, given the tendency for some lenders to withhold finance from neighbourhoods considered to be high economic risk (National Employment Panel, 2005).

Other reasons highlighted in the literature for the finance gap effecting BMEBs are cultural and language barriers. Thus Ram et al. (2001) found that there were strong feelings against using banks amongst the BMEBs they studied, based on cultural and religious practices as well as concerns about language barriers resulting from the limited employment of ethnic minority staff by the banks themselves. However, the counter-argument against the finance gap hypothesis among this group of entrepreneurs is that many BMEBs are in low value added and over crowded sectors such as retailing, wholesale, restaurants and other consumer services (Ram et al., 2001). In addition, the Bank of England (1999) study concluded that the problems of accessing finance by ethnic minority entrepreneurs were due to their concentration in sectors where there is intense competition and low business survival rates. Although the bank managers interviewed in the Scotland and London studies claimed that they did not exclude any particular sectors, it was clear that entrepreneurs in sectors characterised by intense competition will find it difficult to raise finance, especially if they are operating in ways that do not fit the banks' own internal guides on benchmarking for the sector.

4. CONCLUSIONS

Because of market imperfections and the various factors, both perceived and real, that can stand in the way of businesses being able to access finance from different sources, it is arguably more useful to identify finance gaps (i.e. where there is clearly unmet demand for finance) than to try and demonstrate categorically whether or not market failure exists. This paper has set out to investigate finance gaps that arise from the relationship between entrepreneurs and SME owner-managers on the one hand and finance providers on the other. In doing so, it has been concerned with exploring whether the difficulties that certain types of SME face in accessing finance are caused by two issues that feature prominently in the literature, namely information asymmetry and reputational effects. This has been done in relation to two recent studies of SME access to finance in the UK undertaken by the authors, one in Scotland and the other in London, both of which have used a methodology incorporating a demand-side and a supply-side perspective on the research problem.

Although the majority of SMEs appear to have little difficulty in obtaining the finance that they require from external sources, both studies showed a significant minority of SMEs encountering difficulties. In itself of course, this does not indicate market failure, since these

difficulties may arise because of fundamental weaknesses in the business case being presented for funding rather than because of sub-optimal lending practices by banks and other funding providers. Indeed, the evidence from the Scotland and London studies together with other research evidence does indicate that much of the lack of success in obtaining finance stems from inadequacies in the business case presented to finance providers, with many of the businesses experiencing difficulties operating in sectors where they face intense competition, low profitability and limited growth prospects.

At the same time, however, the research has revealed instances of finance gaps that have contributed to some potentially viable business proposals not being funded. This was found to apply to some manufacturing SMEs that were seeking finance for new product and market development and investing in upgrading plant and machinery, with their owner-managers criticising the banks for being over-cautious and risk averse and unable to understand the nature of their business. There is some indication that information asymmetry provides part of the explanation in these instances. There is less support for the suggestion that information asymmetry explains why a relatively high proportion of younger SMEs encounter problems accessing external finance since the evidence from the two studies suggests that the difficulties are more likely to arise because of the lack of a trading history and the difficulties of providing the level of collateral and financial security that finance providers look for. There is however some indication of entrepreneurs lacking knowledge of available finance sources and how to go about applying to them, this being particularly evident amongst some women entrepreneurs. Also, a lack of confidence in approaching finance providers has also been found to contribute to the lower demand from women-led businesses, this being an example of the 'discouraged borrower effect'. There are clearly a number of interrelated factors that explain why BMEBs, and Black businesses in particular, struggle to obtain external finance, although research suggests that reputational effects such as perceived if not actual discrimination are part of the explanation.

Clearly a key question at the present time concerns the impact of the global financial situation and economic downturn on the ability of SMEs to obtain the finance that they require from external sources. The findings presented in this paper relate to more favourable economic conditions since the Scotland study was carried out in 2007, prior to the onset of the credit crunch within the UK, and although the London study was undertaken in 2008, much of the survey data that it used related to 2007. Having said this, it was possible to incorporate some questions on the effects of the credit crunch in the interviews undertaken with a sample of London-based SME owner-managers, accountants, business advisors, and various finance providers between August and October 2008.

Whilst only a few SME owner-managers could give specific details about how their ability to raise finance had been affected, about a third of them expected their ability to raise finance to be adversely affected in terms of the cost of borrowing and the tightening of the lending criteria by finance providers. Concerns were also expressed about the increasing reluctance of lenders to fund more risky sectors and about the effect of falling property values on their ability to provide the required security. There was also some indication that demand was beginning to shift away from investment and growth finance towards recovery/rescue finance (particularly in the construction and property related sectors).

On the supply-side, the commercial banks reported a decline in the demand for loan finance from SMEs (in one case a 15 per cent fall in the year to August 2008). In terms of debt finance, it was reported that banks were favouring larger funding proposals as well as concentrating on those existing SMEs with a good history of managing debt, making it more difficult for start-up and early stage businesses to obtain funding. It was generally thought that bank lending criteria were being tightened through stiffer credit scores and loan to value ratios, with the market for smaller business loans suffering most. With regards to equity

finance, most interviewees considered that the credit crunch would have an adverse effect as less funds became available, leading to a widening equity gap for smaller amounts (below £2 million). There was also some evidence that business angels were retrenching and using their capital to support current investments and avoiding new deals.

Overall, therefore, it looks as if the impact of the credit crunch in the UK will be to exacerbate the funding gaps experienced by those types of SME that were already facing the greatest difficulties in raising external finance, namely start-ups and early stage businesses, manufacturing SMEs, and BMEBs. It remains to be seen how effective the recent actions taken by the UK Government (e.g. the introduction of the new Enterprise Finance Guarantee to try to stimulate lending to small firms) will be in closing these finance gaps.

References:

Allinson, G., P. Braidford, M. Houston and I. Stone (2005) *Myths surrounding starting and running a business*, Research Report by Durham Business School for the Small Business Service, London

Bank of England (1999), *The financing of ethnic minority firms*, A Special Report.

Bank of England (2004) *Finance for Small Firms: An Eleventh Report*, Bank of England, London

Browne, J. (2004) "*Female entrepreneurs: out of frying pan – into the fire?*", paper presented at the 27th National conference of the Institute of Small Business and Entrepreneurship, Newcastle Gateshead, November.

Carter, S., S. Anderson and E. Shaw (2001) *Women's Business Ownership: A review of academic, popular and internet literature*, Research report to the Small Business Service.

CEEDR (2000) *Researching the needs of African Caribbean business owners in London*, Report commissioned by Government Office for London, Centre for Enterprise and Economic Development Research, Middlesex University.

Centre for Business Research (CBR) (2008) *Financing UK small and medium sized enterprises: the 2007 survey*, University of Cambridge.

de Meza, D. (2002) "Overlending?" *Economic Journal*, 112 (477), F17-F31.

Deakins, D., M. Ishaq, D. Smallbone, G. Whittam and J. Wyper (2005) *Minority Ethnic Enterprise in Scotland: A National Scoping Study*, Final Research Report for Scottish Executive.

Felsenstein, D. and A. Fleischer (2002) "Small-Scale Entrepreneurship and Access to Capital in Peripheral Locations: An Empirical Analysis" *Growth and Change*, 33 (2), 196-215.

Fraser, S. (2009) *How have SME finances been affected by the credit crisis?*, paper presented at BERR/ESRC Seminar on SME Access to Finance, 12th February.

Fraser, S. (2005) *Finance for Small and Medium-Sized Enterprises*, Report on the 2004 UK Survey of SME Finance, Centre for Small and Medium-Sized Enterprises, Warwick Business School, University of Warwick.

Hall, G. P. Hutchinson and N. Michaelas (2000) "Industry effects on the determinants of unquoted SMEs' capital structure", *International Journal of the Economics of Business*, 7 (3), 297-312.

Hsu, D. (2004) 'What do entrepreneurs pay for venture capital affiliation?' *The Journal of Finance*, LIX, 1805-1844.

Kon, Y. and David J. Storey (2003) "A Theory of Discouraged Borrowers", *Small Business Economics*, 21 (1), 37-49.

Marlow, S. and E. Watson (2006) "A safety net or ties that bind? Women, welfare and self-employment", *International Journal of Sociology and Social Policy*, 26 (9/10), 397-410.

Marlow, S. and S. Carter (2006), *Access to finance: women's enterprise and the role of the accountant*, Report to the Association of Chartered Accountants.

National Economic Research Associates (1990) *An Evaluation of the Loan Guarantee Scheme*, Department of Employment, Research Paper No. 74.

National Employment Panel, (2005), *Enterprising people, enterprising places: Measures to increase ethnic minority employment and business growth*, Report by the National Employment Panel, May 2.

OECD (2008) *Rural Policy Reviews: Scotland UK – Assessment and Recommendations*, OECD, Paris.

Ram, M and D. Smallbone (2001) "Ethnic minority business in comparative perspective: the case of the independent restaurant sector", *Journal of Ethnic & Migration Studies*, 26, 495-510.

Roper, S. and J. Scott (2007) "Gender Differences in Access to Start-up Finance: an econometric analysis of GEM data", paper presented at the 30th ISBE Conference, Glasgow. SBS (2006) *Booster Survey, Small Business Survey*, DTI, London.

Schmid, F. (2001) 'Equity financing and the Entrepreneurial Firm', *Federal Reserve Bank of St Louis Review*, 83, 15-28.

Scottish Enterprise (2007) *Princes Scottish Youth Business Trust: Evaluation of Impact and Strategic Contribution*, Scottish Enterprise, Glasgow

Scottish Government (2008) *Scottish SMEs' Access to Bank Finance*, study undertaken by CEEDR and PERC for the Enterprise, Energy and Tourism Directorate, Scottish Government.

Shane, S. and D. Cable (2002) "Network ties, reputation, and the financing of new ventures", *Management Science*, 48, 364-382.

Small Business Service (2005), *A mapping study of venture capital provision to SMEs in England*, October 2005.

Stiglitz, J. and A. Weis (1981) "Credit Rationing in Markets with Imperfect Information", *American Economic Review*, 71, 393–410.

Storey, D. (1994) *Understanding the Small Business Sector*, Routledge, London.

Watanabe, W. (2005) *How are SME Loans priced by the Main Bank? Bank Affects, Information and Non-price Terms of Contract?*, RIETI Discussion Paper Series 05-E-028.

Wilson, F., S. Carter, S. Tagg, E. Shaw and W. Lam (2007) "Bank officer Perception of Business Owners: The Role of Gender", *British Journal of Management*, 18 (2), 154-67.

Zerbe, R. and H. McCurdy (2005) "The failure of market failure", unpublished paper, University of Washington.

The empirical study on Kibo Technology Rating System

: The past performance overview and the particular analysis on its peculiar appraisal element, Owner's technology Capability.

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ABSTRACT

This paper illustrates the recent research outcomes on Kibo Technology Fund's KTRS. KTRS allows Kibo experts comprehensively judge a company's potential such as technological excellence, marketability, business applicability, and management capability. It is unique in that it combines qualitative elements with default probabilities.

KTRS consists of forty five indices. The method of technology appraisal includes obtaining 'Technology levels' and assessing 'Risk levels'. Kibo offered 6,926 billion won to 10,768 firms by exclusively using KTRS from July, 2005 to December, 2008.

Especially, firms with low credit ratings not eligible for bank loans were 45% among 10,768 firms. However, the default rate was merely 2.92%.

Kibo's Certificate of technology level rating also made bank loans without credit guarantee newly available; 712 cases and 219 billion won.

The research also found owner's technology experience level was very important element for commercialization success in SMEs.

1. What is a technology appraisal?

Generally, technology appraisal can be largely categorized into technology ability appraisal and technology value appraisal. Technology ability appraisal can be categorized into technology grade appraisal and technology ability appraisal.

Firstly, technology grade appraisal is to value business possibility of technology by percentage or grade. Technology ability appraisal is to value the overall technology ability of an enterprise and to collectively value an individual technology level, a technology manpower, intellectual property rights, and research facilities or the like. Technology value appraisal is to convert value or individual technology into money so

as to calculate a technology trade price or a security value of an intellectual property.

Here, grade appraisal methods of technology include a scoring model, a profile model, and a checklist model or the like. In the scoring model, scores are given to appraisal point of technology ability and weight is applied to each appraisal points so as to value technology grades. In the profile model, appraisal factors are represented in a figure and advantages and there is an advantage for rapidly grasping disadvantages of corresponding technology. In the checklist model, check points to be necessarily checked are set, cut-off criteria are set and then, it is checked whether all of check points satisfy predetermined criteria values.

In such conventional technology appraisal models, each appraisal factor is determined, scores is given to each appraisal factor, and technology is valued by score or grade. Here, a business insolvency risk is not considered and thus, there are limitations in utilizing technology appraisal results as technology finance such as a credit loan, investment or the like.

In addition, in conventional technology appraisal methods, there are limitations in which the progress of enterprise due to an economic environment or an economic factor is not reflected and thus, the reliability of the appraisal is not high.

Furthermore, in conventional technology appraisal methods, there are limitations in which the progress of enterprise insolvency fluctuation cannot be shown, and there are no models in which similar technology appraisal examples of the past enterprises are analyzed and management results of a new enterprise can be predicted.

2. Introduction about KTRS(Kibo Technology Rating System)

Kibo Technology Fund provides credit guarantees to technology SMEs through its own distinguished technology appraisal system, KTRS(Kibo Technology Rating System). Differently from existing financial statement based appraisals, the system allows KIBO experts comprehensively judge a company's potential such as technological excellence, marketability, business applicability, and management capability. It is unique in that it combines qualitative potential with probability of defaults.

KTRS provides a method of technology appraisal by which an environmental risk due

to an economic environment and an economic factor and a technology commercialization risk are reflected, and exclusive technology appraisal points are reconstructed based on significance analysis results of literature inquiry and the past technology appraisal index, a balance matrix method is induced to improve objectivity, neutrality, and subsidiarity of check points by point so that the reliability of appraisal index and application method is verified.

KTRS's public trust 'technology rating grade(technology appraisal authentication grades)' for use in various purposes, such as technology transfer, technology trade, and technology finance(financing and investment) or the like, are provided so as to constitute conditions for revitalizing technology finance support for innovation-leading small and medium business.

<Table 1> History of KTRS

	Contents
1999.2	"Technology Appraisal Guarantee Scheme" was launched.
2004.12	KTRS(Kibo Technology Rating System) was developed.
2005.7	KTRS – first implemented.
2006.11	KTRS ; Edelman Prize Award Semi-Finalist.
2007.4	KTRS was Patented in Korea.
2008.10	KTRS was Patented in Singapore.

KTRS consists of four large points and forty five indices.

Four large points are Owner's technology capability, technological excellence, marketability, and business possibility & profitability.

Table 2 is expressing 45 details indices.

<Table 2> 45 detail indices of KTRS

Large points	Medium points	Small points	Detail indices
Owner's technology capability	Technology management capability(owner)	Technology experience(knowledge) level	-Owner's technology experience level -Technology management strategy -Owner's technology knowledge level -Owner's technology understanding
		Management capability	-Technology man power management -Crisis management -Management will and business ability
		Management human	-Educational background and carrier of

		configuration and team-work	management -Capital participation -Relationship with representative and team work
Technology ability	Research development capability	Technology development promotion capability	-Organization of whole responsibility for development -Development man power
		Technology & Research development investment situations	-Technology and authentication results -Intellectual property possession situations -Research development investment ratio
	Excellence of technology(product)	Technology innovation capability	-Discrimination of technology -Imitation difficulty -Position on life cycle of technology
		Technology completeness	-Completeness of technology -Independence of technology -Coincidence with business strategy
		Technology expandability	-Technology spill over effect inside & outside enterprise -Application and expandability of technology
	Marketability	Marketability of technology(product)	Competition situations
Market formation			-Scale of market -Growth rate of market -Restrictions/encouragement factors such as law and regulation etc.
Competitive product			-Recognition -Rate of market share -Comparison superiority with replacement

Business possibility & profitability	Productivity of technology(product)	Commercialization capability of technology and productivity	-Production facility acquisition facilitation -Production man power acquisition facilitation -Material and component supply facilitation
	Management capability	Management capability(e.g. capital)	-Capital supply capability -Added value creation capability -Optimum level of investment scale
	Business capability of technology(product)	Marketing capability	-Validity of sales plans -Variety and stability of sales places -Marketing man power acquisition
	Profitability	Profit creation capability	-Rate of sale growth -Rate of income before tax
Profit prospect		-Withdrawal possibility in comparison with investment -Investment profitability	

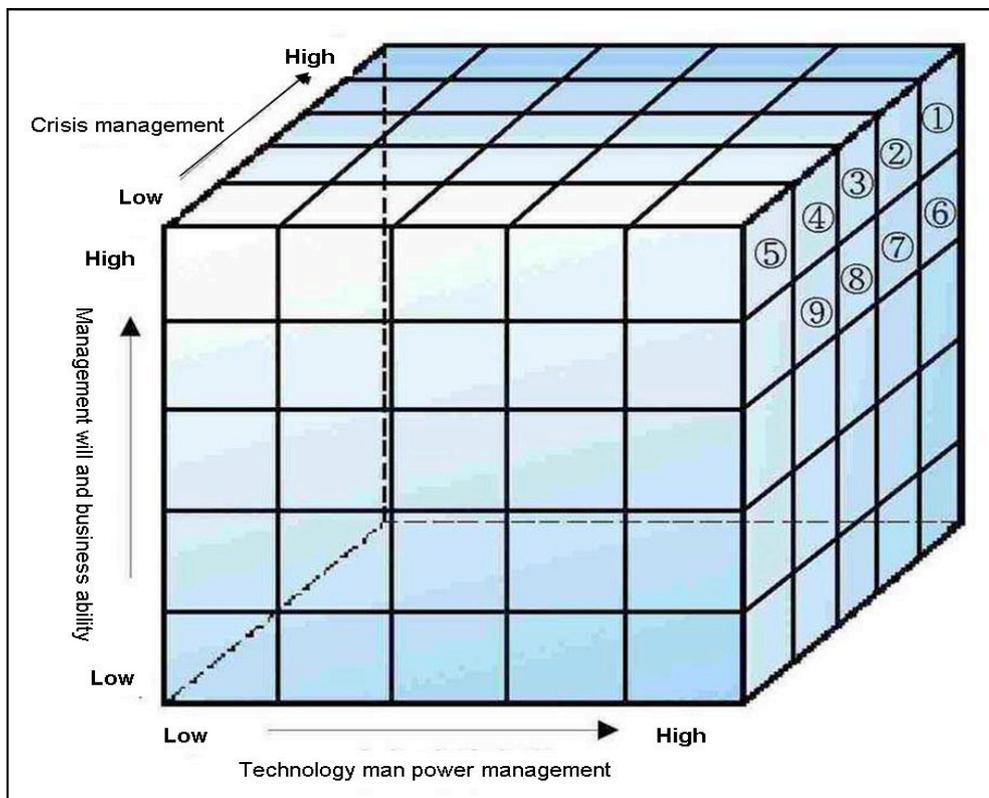
A valuer logs in a technology appraisal table and inputs appraisal contents of detail indices according to technology appraisal points. Then, the calculating of the scores according to each technology appraisal point(small point) may include calculating detail check points according to each technology appraisal point(small point) by a 5×5 balance matrix or a 5×5×5 balance matrix. When the KTRS calculate technology appraisal grades, it just used 16 small points.

Figure 1 is expressing 5×5 matrix and figure 2 is showing 5×5×5 matrix.

<Figure 1> Structure of 5×5 matrix

Technology spill over effect inside & outside enterprise	A	6	7	8	9	10
	B	5	6	7	8	9
	C	4	5	6	7	8
	D	3	4	5	6	7
	E	2	3	4	5	6
		E	D	C	B	A
		Application and expandability of technology				

<Figure 2> Structure of 5×5×5 matrix



The method of technology appraisal includes obtaining 'Risk levels' and obtaining

‘Technology levels’.

The risk levels(R1~R10) are technology-based enterprise risk grades for checking a business insolvency risk of an enterprise based on corresponding technology by statistically analyzing commercialization conditions of technology expected to be commercialized or in progress, technology ability. For the make a guideline of risk levels, we analyzed data of 11,000 cases that evaluated during past 5 years by statistical technique (logistic regression analysis) and founded relationships with default of firms. The risk levels are calculated by combine the risk in technology feasibility and environmental risk (e.g.: economical indices and enterprise characteristic indices).

The technology levels(V1~V10) are technology-based grades for calculating business success possibility of an enterprise based on corresponding technology and technology innovation capability by collectively checking technology excellence, business possibility, and marketability. The technology levels' weight was decided through AHP(Analytic Hierarchy Process) analysis of experts.

In the technology appraisal(authentication) grades, the risk levels and the technology levels are collectively checked by a matrix and grades are given to the checked risk levels and technology levels and are indicated by 10 grades(AAA-D).

Table 3 is expressing the meaning of 10 grades and figure 3 is showing the combination for technology appraisal grades calculation.

<Table 3> Meaning of grades

Classification	Most superior	Very superior	Superior	Good	Above the average	Average	Below the average	Insufficient	Inferior	Very inferior
Risk Levels	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10
Technology Levels	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10
Technology appraisal(authentication) Grades	AAA	AA	A	BBB	BB	B	CCC	CC	C	D

<Figure 3> Technology appraisal (authentication) grades by matrix

Technology levels	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10
Risk levels										
R1		AAA								
R2										
R3										
R4										
R5										
R6										
R7										
R8										
R9										C
R10										D

Give technology appraisal(authentication) grades by combination of 'Risk levels' and 'Technology levels'

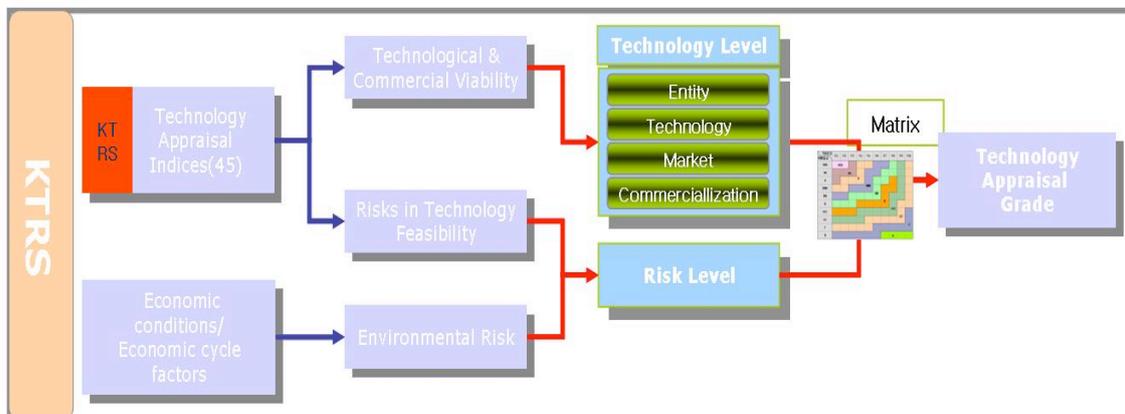
- 10 grades -

AAA, AA, A, BBB, BB, B, CCC, CC, C, D

Figure 4 is a flowchart for calculating appraisal grades according to technology appraisal points by KTRS. As illustrated figure 4, a valuer logs in a technology appraisal table and inputs appraisal contents of detail check points according to technology appraisal points (small points).

The input appraisal contents are categorized into quantitative appraisal points, check appraisal points, and valuer appraisal points according to appraisal methods.

<Figure 4> Flowchart for calculating technology appraisal grades by KTRS



The quantitative appraisal points are valued by values obtained by automatically calculating using a system by utilizing separately-input enterprise data such as enterprise overview data and enterprise financial affair data or the like. Since the quantitative appraisal points are automatically calculated using the system, it is very important to check whether input of data is omitted or not.

The quantitative appraisal points include appraisal points by levels(sizes) of corresponding calculating values and appraisal points by levels in comparison with averages in the same industry.

In the check appraisal points, a valuer checks check points presented as appraisal criteria and performs automatic appraisal by the number of checked points.

Objects of valuer appraisal points are appraisal points excluding quantitative and check appraisal points. In the valuer appraisal points, a valuer gives arbitrary grades by appraisal criteria presented on a appraisal screen and performs appraisal.

Korean patent was registered on April, 2007, and Singapore patent was registered on October, 2008 about the method of technology appraisal by KTRS.

3. Excellent performance of KTRS

Kibo offered 6,926 billion won to 10,768 firms by exclusively using KTRS from July, 2005 to December, 2008.

Table 4 is expressing the technology appraisal cases and credit guarantee amount by KTRS from July, 2005 to December, 2008.

<Table 4> Technology appraisal cases & Credit guarantee amount by KTRS
(July, 2005~December, 2008)

	2005	2006	2007	2008	Total
Technology appraisal cases	340	1,357	3,003	6,068	10,768
Credit guarantee amount (billion won)	154	890	2,411	3,471	6,926

Especially, firms with low credit ratings not eligible for bank loans were 45% among 10,768 firms. That is, KTRS is showing result differentiating with existent credit assessment model.

Kibo can confirm that select exactly innovation SMEs by technology appraisal using KTRS.

Table 5 is showing the supported status about low credit rating firms. Generally, under B grade firms by Kibo's credit rating is an enterprise which can not receive unsecured loans from bank. However, Kibo supports low credit rating firms, underprivileged firms from finance, through KTRS.

<Table 5> Supported status about low credit rating firms

		Credit Rating											Total
		AAA	AA	A	BBB	BB	B	CCC	CC	C	D	Not exist	
Technology appraisal grade	AAA	4	1										5
	AA	47	78	37	30	17	15	10				3	237
	A	122	245	273	360	209	191	105	40	25	6	22	1,598
	BBB	78	190	289	690	556	573	303	120	17	2	178	2,996
	BB	26	115	232	715	669	664	404	69	16	5	361	3,276
	B	13	47	105	364	458	641	338	77	16	6	585	2,650
	CCC						1	1			1	2	5
	CC												0
	C											1	1
	Total	290	676	936	2,159	1,909	2,085	1,161	306	74	20	1,152	10,768

Support results about SMEs are important, but it is point to see very importantly that default rate by KTRS's grade is appearing to significant result.

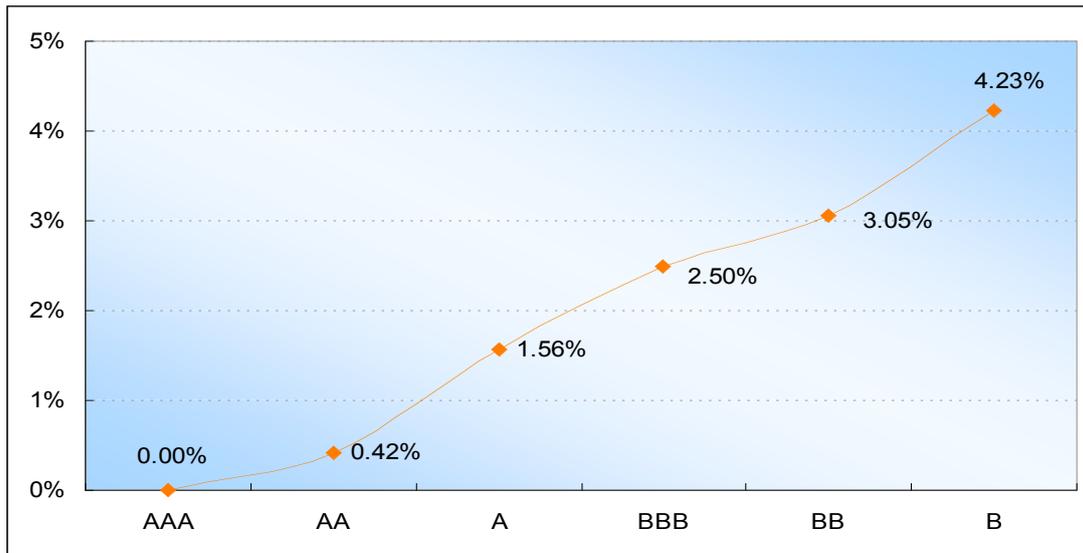
Firm's default rate which supported credit guarantee by KTRS was merely 2.92%. The analysis conducted so far shows that default rate of AAA grade was 0% , default rate of AA grade was 0.42%, default rate of A grade was 1.56%, default rate of BBB grade was 2.50%, default rate of BB grade was 3.05%, default rate of B grade was 4.23%, and default rate of C grade was 100.00%.

<Table 6> Default rate of KTRS (July, 2005 ~ December, 2008)

Technology appraisal grades	Guarantee cases by KTRS		
	Credit guarantee Cases	Default cases	Default rate
AAA	5	0	0.00%
AA	237	1	0.42%
A	1,598	25	1.56%
BBB	2,996	75	2.50%
BB	3,276	100	3.05%

B	2,650	112	4.23%
CCC	5		0.00%
CC	0	0	-
C	1	1	100.00%
Total	10,768	314	2.92%

<Figure 5> Default rate comparison by technology appraisal grade

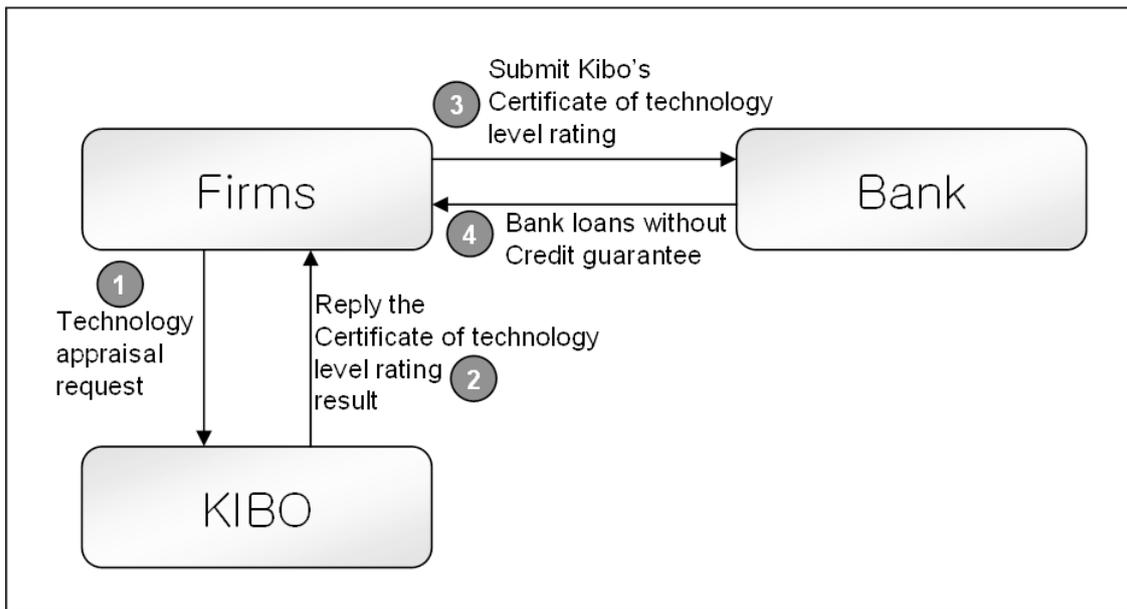


As tendency which default rate rises by technology appraisal grade is lower, and in this result (from table 6 and figure 5), we can know that KTRS is very good credit assessment model for reliability.

Kibo's Certificate of technology level rating also made bank loans without credit guarantee newly available ; 712 cases and 219 billion won from 2006 year.

Figure 6 is expressing framework of 'Certificate of Technology Level Rating' business. Kibo just offer certificate without credit guarantee to the firms. If the firms submit kibo's certificate to the bank, the bank judge whether a firm is proper or not using kibo's certificate and bank's credit assessment.

<Figure 6> Framework of 'Certificate of Technology Level Rating' business by Kibo



‘Certificate of technology level rating’ business is the foremost unsecured loans commodity that utilize technology appraisal, and the most important thing for Certificate of technology level rating business success is significant default rate by KTRS's grades.

Table 7 is showing status of ‘Certificate of Technology Level Rating’ by year. This business was enforced first by convention with 'Woori bank' in 2006. However, in 2006, there were a lot of trial and errors being state that do not accumulate KTRS's default rate measurement.

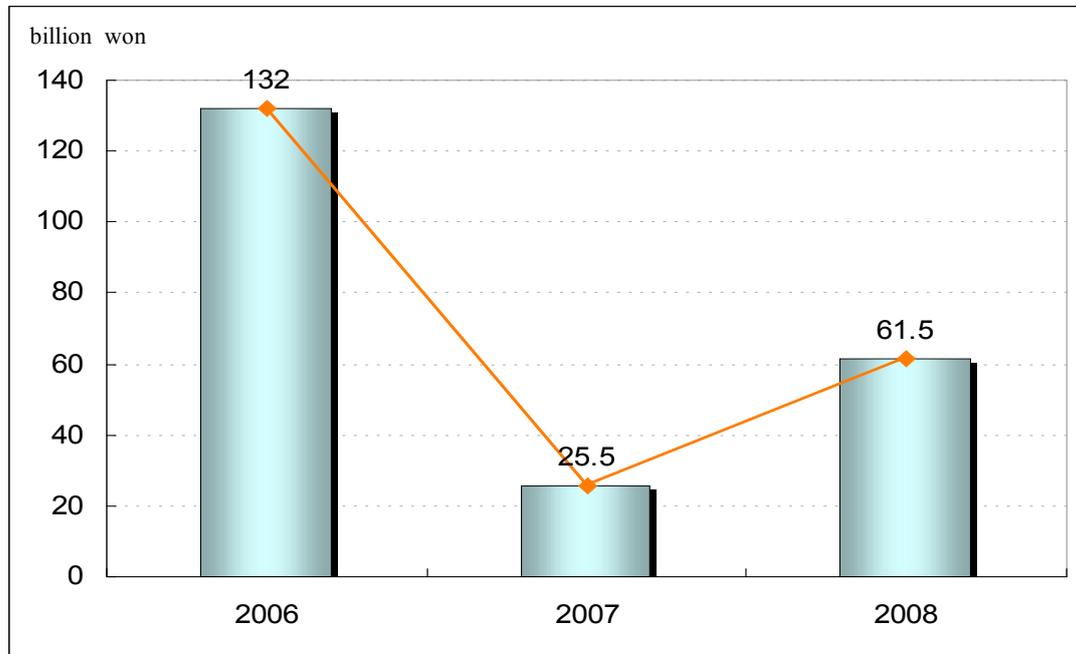
So, kibo’s certificate business was not activated in 2007 less than in 2006.

<Table 7> Status of Certificate of technology level rating by year

	Certificate of technology level rating(2006~2008)	
2006	Cases offered	430
	Loaned cases	222
	Loaned money(billion won)	132
2007	Cases offered	329
	Loaned cases	58
	Loaned money(billion won)	25.5
2008	Cases offered	881
	Loaned cases	432
	Loaned money(billion won)	61.5

Total of Loaned cases	712
Total of Loaned money(billion won)	219

<Figure 7> Status of Loaned money by Certificate of technology level rating



4. What is a critical element for commercialization success in SMEs?

Owner's technology capability has been recognized as one of the most important indices especially when evaluating SMEs. However, due to its difficult-to-quantify characteristics, utilization was limited in the process of corporate valuation. This research attempts to analyze such an important element by offering empirical analysis of the Owner's technology Capability based on 10,768 firms financed through KTRS.

Among 45 detail indices of KTRS, indices connected with owner's technology capability is 10.

Large point of owner's management capability is consists of three small points and ten indices.

<Table 8> 10 indices about Owner's technology capability

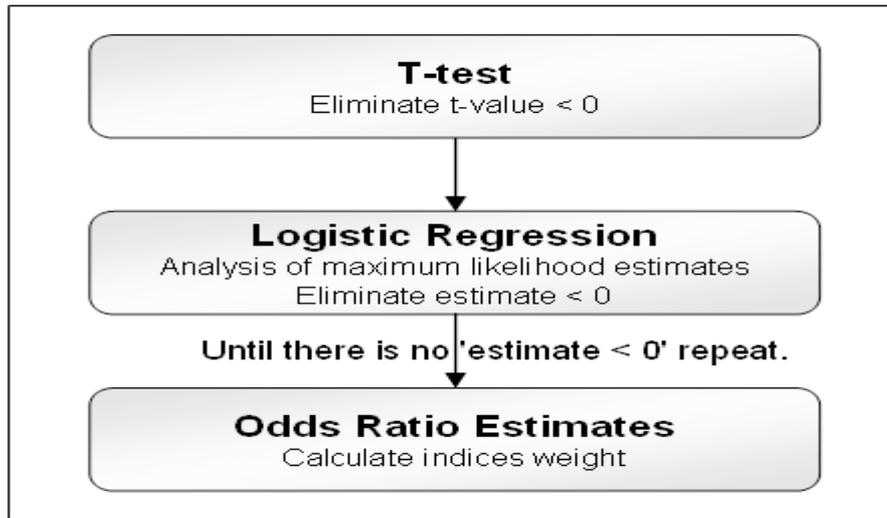
Large points	Medium points	Small points	Detail indices
Owner's technology capability	Technology management capability(owner)	Technology experience(knowledge) level	-Owner's technology experience level -Technology management strategy -Owner's technology knowledge level -Owner's technology understanding
		Management capability	-Technology man power management -Crisis management -Management will and business ability
		Management human configuration and team-work	-Educational background and carrier of management -Capital participation -Relationship with representative and team work

This research analyzed significant with owner's technology capacity 10 indices and firm's default using credit guarantee support data about 10,768 firms by technology appraisal(KTRS).

In this paper, data analysis used SAS 9.1 version.

Figure 8 is expressing the research process for found important element in owner's technology capability. First, we conduct t-test and eliminate t-value < 0 . And next, we eliminate maximum likelihood estimate below zero(o) by logistic regression analysis. Finally, we calculate the indices weight using odds ratio estimates.

<Figure 8> Research process for found important element



We have 314 firms default data among 10,768 firms data by KTRS, default rate is 2.92%.

Table 9 is showing final analysis result by logistic regression analysis.

<Table 9> Analysis result of maximum likelihood estimates

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	1.0295	0.6222	2.7379	0.098
Owner's technology experience level	1	0.262	0.0774	11.4522	0.0007
Owner's technology knowledge level	1	0.134	0.0506	7.0262	0.008
Technology man power management	1	0.1106	0.0778	2.0209	0.1551
Management will and business ability	1	0.00837	0.1006	0.0069	0.9337
Educational background and carrier of management	1	0.0351	0.0834	0.177	0.6739
Capital participation	1	0.0196	0.0562	0.122	0.7268
Relationship with representative and team work	1	0.0915	0.1079	0.7201	0.3961

Table 10 is showing each indices weights in owner's technology capability by odds

ratio estimates.

<Table 10> Each indices weights in owner's technology capability

Odds Ratio Estimates				Weights in Owner's technology capability, 10 indices
Effect	Point Estimate	95% Wald Confidence Limits		
Owner's technology experience level	1.299	1.117	1.512	41.59
Owner's technology knowledge level	1.143	1.036	1.263	19.89
Technology man power management	1.117	0.959	1.301	16.27
Management will and business ability	1.008	0.828	1.228	1.11
Educational background and carrier of management	1.036	0.88	1.22	5.01
Capital participation	1.02	0.913	1.139	2.78
Relationship with representative and team work	1.096	0.887	1.354	13.35

As see in result, the most important element for commercialization success in SMEs is 'Owner's technology experience level'. That's weights is near in half by 41.59.

Owner's technology experience level is an index that concerned with category of business experience by korean standard industrial classification(e.g: 2digit).

Next important element is 'Owner's technology knowledge level'. This is an index that concerned with scholarship, duties, and certificate of qualification.

Conclusively, in this empirical research, owner oneself's capacity can confirm that is the most important element in SMEs' success.

5. Conclusion

This paper illustrates the recent research outcomes on Kibo Technology Fund's KTRS. KTRS allows Kibo experts comprehensively judge a company's potential such as technological excellence, marketability, business applicability, and management capability. It is unique in that it combines qualitative elements with default probabilities.

KTRS consists of forty five indices. The method of technology appraisal includes obtaining 'Technology levels' and assessing 'Risk levels'. Kibo offered 6,926 billion won to 10,768 firms by exclusively using KTRS from July, 2005 to December, 2008.

Especially, firms with low credit ratings not eligible for bank loans were 45% among 10,768 firms. However, the default rate was merely 2.92%.

Kibo's Certificate of technology level rating also made bank loans without credit guarantee newly available; 712 cases and 219 billion won.

Kibo's Certificate of technology level rating will be development for private finance commodity in the bank loans without guarantee. Because KTRS can presume PD(Probability of Default) value by technology appraisal grade in end of this year.

In this research also found owner's technology experience level was very important element for commercialization success in SMEs. That's weights is near in half by 41.59 and we firmly believe owner oneself's capacity is the most important element in SMEs' success.

Bibliography

- May, E. (2001). *Handbook of Credit Scoring*. Chicago : Glenake Publishing Company.
- Makuch, W. M., Dodge, J. L., Ecker, J. G., Granfors, D. C., and Hahn, G. J. (1992), "Managing Consumer Credit Delinquency in the U.S. Economy: A Multi-Billion Dollar Management Science Application," *interface Special Issue: Franz Edelman Award Papers*, 22 (1), 90-109
- Paul, D. A. (1999). *Logistic Regression using the SAS System: Theory and Application*. Cary, NC:SAS Institute.
- Hand, D. J. and W. E. Henly. (1997), "Statistical Classification Methods in Consumer Credit Scoring ; A Review," *Journal of the Royal Statistical Society, Series A*, 160, 523-541.

- Lewis, E. M. (1992). *An Introduction to Credit Scoring*. Fair, Isaac and Company, Inc.
- Montgomery, D.C. (1996). *Introduction to Statistical Quality Control(3th ed)*. John Wiley & Sons.
- Van-Horne, J.C. (1989). *Financial Management and Policy (8th ed)*. Englewood Cliffs, New Jersey :Prentice-Hall, Inc.
- Weston, J. F. and Thomas, E.(1985). *Copeland, Managerial Finance (8th ed)*. Hinsdale, Illinois : The Dryden Press.
- Hartigan, J. A. (1975). *Clustering Algorithms*. New York: John Wiley & Sons, Inc.
- MacQueen, J. B. (1967). "Some Methods for Classification and Analysis of Multivariate Observations," *Proceedings of the Fifth Berkeley Symposium on Mathematical Statistics and Probability*, 1, 281 -297
- Spath, H. (1985). *Cluster Dissection and Analysis*. Chichester, England: Ellis Horwood.
- Michael, J. A. and Gordon, L. (1997). *Data mining techniques: for marketing, sales, and customer support*. New York: Wiley Computer Pub.
- Quinlan, J. R. (1992). *C4.5: programs for machine learning*. Morgan Kaufman Series. In: Machine learning, Dordrecht: Kluwer.
- Shin, I. H. (2008). "Development of Financial Performance Measurement Method of Management Innovation Activity," Ph.D. dissertation, Ajou University, 82-98
- Sohn, S.Y., Moon, T.H. and Kim, S.H. (2005). "Improved Technology Scoring Model for Credit Guarantee Fund", *Experts System with Applications*, 28 (2). accepted.
- OECD(1997), *Proposed Guidelines for Collecting and Interpreting Technological Innovation Data (The Oslo Manual)*, 2nd Edition, Paris, Organization for Economic Cooperation and Development.
- Kibo Technology Fund (2008). *Evaluation of Business and Technology*. South Korea, Kibo Technology Fund.

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A suggestion on a settlement for SME's liquidity crunch under the recent economic crisis- the South Korean Case –

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As the Wall Street financial crisis has been overspreading the global economy since last winter, South Korea's economy is slowing down at a faster pace. And financial condition for SMEs is in a paralysis of market as reining in bank borrowing. Even the healthy SMEs is in a coma.

The government is absolutely in a dilemma. If it enforces banks to lend SMEs, it could hamper the bank's Capital Adequacy Ratio, which might jeopardize the whole economy. To overcome this dilemma, the policy should break a 'difficulty of cash flow' to expand the credit on SMEs not clashing with the effort for increasing the bank's Capital Adequacy Ratio.

This study shows that government financial aid for SMEs in the form of a 'redeemable preference share' will achieve a goal of improving banks' Capital Adequacy Ratio and enhancing cash flow to SMEs.

Track: 11. Financing SMEs

Entrepreneurship against all Odds - ‘System D’ – a winning combination against obstacles to entrepreneurship in France

Introduction

Whereas Granovetter (1992, p. 47) viewed context as an economic institution resulting from “socially situated individuals embedded in networks of personal relations with non-economic as well as economic aims”, Johannisson et al. (1994) proposed that “the organising context carries the generic function with which to balance the entrepreneur’s need for both guidelines and independence and her/his firm’s need for stability and change. The context thus helps the entrepreneur to practically realize or enact her/his venture” (p. 330).

Following Johannisson et al. (1994) there are a number of reasons that justify a contextual approach to entrepreneurship. First, the liability of newness of a newly established venture as well as the dominance of large companies in the corporatist societies of Western Europe have created a political and institutional system that favours large-scale operations. Consequently young entrepreneurial firms need all the support they can get to acquire the legitimacy and resources to stay in business. This support would be provided by the context. Second, it has been argued elsewhere that “entrepreneurship is perpetual learning through action” (Johannisson et al. 1994, p. 330). Consequently, the context provides a learning setting for the young enterprise. Third, entrepreneurs need to manage ambiguity and the entrepreneur needs a ‘retreat’, i.e. a local or regional or national context which balances the uncertainty of the commercial operations and where (s)he feels at home. Fourth, in the 1980s there has been a trend to create alternative national strategies to promote the competitiveness of small firms. This together with the emergence of concepts such as the ‘industrial district’, as a spatial agglomeration of small firms creating a local texture that compensates for the lack of resources and isolation (Prax 2004), emphasises the importance of the context for enterprise creation. Fifth, both science parks and locally initiated economic development are phenomena of the 1980s. Arguably, context here refers to the socio-economic conditions in which the entrepreneur and the venture are embedded. Sixth, the organising context encompasses values which favour entrepreneurship and will support the entrepreneur in fulfilling both his existential and materialistic expectations when launching a business venture (Johannisson 1988). Yet, there may be regional variations in values and attitudes towards entrepreneurship as well as differences in structural conditions that impact on the creation and development of new firms (Johannisson 1987b). Seventh, as Johannisson (1988) observed,

the organising context may be a spring-board (supporting ecological change/enactment), a gear-box (supporting selection), a shock-absorber or defence wall (supporting retention) between the entrepreneur and environments beyond the context. Johannisson neglected, however, that the context could also work against the entrepreneur and his venture as I will illustrate in this article. Schutjens & Stam (2003) also warned that contextual influence on networks and networking is rather a complex issue as contexts tend to vary and different situational and social variables interact and affect the individual (Cooper & Dunkelberg 1981, Jack & Anderson 2002). I argue that context plays a significant role in this investigation and the following article will discuss France-specific aspects that have arguably created (un)favourable conditions for entrepreneurship and enterprise creation. I will illustrate the different approaches, the so-called système D (the letter D stands for se débrouiller, ie. working your way around something) entrepreneurs have developed to creating successfully in a system that has not always welcomed entrepreneurship and the entrepreneur.

All thirteen ventures I investigated for this study are embedded in the French socio-economic, political and educational system; all creations share at least a common national context. Two ventures were created in Haute Normandie, a French region close to Paris, the remaining eleven were set up in or around Paris.

This introduction will be followed by a discussion of the importance of enterprise creation within the French context, an explication of the methodology applied in this study, a discussion of the obstacles to entrepreneurship and enterprise creation the study has identified and the different approaches entrepreneurs have developed to cope with a potentially hostile system.

Enterprise creation within the French context

In 2007 321,478 enterprises were created in France, of which 67,888 in business services; followed by construction with 55,497, trade with 49,493, health with 19,689, real estate with 19,805, hotels and restaurants with 18,110 and industry with 15,312 companies (<http://www.apce.com> accessed on 15.01.2009).

Considering the development of the number of creations over the past 14 years we find that the actual number increased by more than 100,000 between 1993 and 2007. Whereas from 1993 to 2002 the number of creations averaged around 216,000, we notice a considerable

increase to 237,064 in 2003 and 268,442 later in 2004 (<http://www.apce.com> accessed on 15.01.2008). One possible explanation for this rise in creations is the publication of a new law, 'la Loi Dutreil', one of a range of public policy measures introduced by the French government in reaction to the general economic situation.

Methodology

This research is based on a study conducted between 2004 and 2008 among 13 French entrepreneurs, 6 sole founders and 7 team foundations, created between 1999 and 2007 within the French context. The entrepreneurs are all Anciens, i.e. graduates from a French Management Grande Ecole with an age ranging from 22 to 55 years. I chose a grounded case study approach combining both one longitudinal and 12 retrospective cases. The majority of the thirteen companies (11 out of 13) were created in the services sector, some of which fall into B to B, some into B to C. The two ventures (P & G and MB and AL), which were founded within a Grande Ecole context, combine a mix of technological and managerial/commercial aspects in terms of the product specifications. Both ventures represent innovative, high tech business and have as such successfully competed in French national competition schemes (concours). Two further ventures (SLB and AC) are Internet start-ups.

The focus of the investigation was on the importance of entrepreneurial networks for the pre-organisation within the French context. In particular the study aimed to investigate who was involved when and why as well as what contribution this person made to the entrepreneurial project. In line with these objectives I employed semi-structured interviews, (participant) observation and repertory grids to explore the different dimensions of the research. This research contributes to existing work on entrepreneurial networks highlighting how entrepreneurs successfully establish their venture within a potentially deterring context and use a hostile system to their advantage.

Obstacles to entrepreneurship in France

Enterprise versus employee culture

In contrast to an entrepreneurial society such as the UK that values private initiative, Abdesselam et al. (2004) and Frugier & Verzat (2005) highlighted that French society is characterised by a wage culture where salaried workers have great historical advantages in

terms of social security, enjoy relative job stability and the possibility to benefit from public goods. Hence staying an employee is a rather attractive option and becoming an entrepreneur may involve high opportunity costs. In fact, as Beranger et al. (1998) suggested, young French people think that it is the government's and the system's responsibility to provide job security and work. As result, the authors concluded, enterprise promotion becomes a difficult task.

A feminine culture

Referring to Hofstede (1983) Fayolle , Hernadez & S enicourt (2005) also underlined the feminine character of French culture. French people prioritise the quality of life and they work to live, but do not live to work which contrasts with the attributes of a masculine culture which prioritises professional success, money and material goods and a general attitude to life that prioritise work over the quality of life. Scoring 43 out of 100 French culture is rather feminine in its character, very different from the US which scored 62 highlighting a much more masculine perspective (Hofstede 1983). As Fayolle, Hernadez & S enicourt (2005) argued, this important aspect of French culture has certainly worked as an obstacle to entrepreneurship.

Risk averseness of French culture

As MacLean (2002) and Gordon (1993) underlined, French business culture is characterised by an infinite search for organisational security which is linked to a deep-rooted need to avoid uncertainty and remove ambiguity. Referring to Hofstede's work (1983) on cultural values, Fayolle, Hernadez & S enicourt (2005) and MacLean (2002) emphasised the risk averseness of French business culture. In fact, in Hofstede's study France scored particularly high on this aspect (86 out of 100), compared with UK's score of 35. As Fayolle, Hernadez & S enicourt (2005) emphasised, the cultural context promotes a risk awareness and a fear of failure which does not encourage the individual to take personal risks like those needed for setting up a business. In addition, MacLean et al. (2006) recently emphasised that for the past few decades France has preferred to prioritise employment security to risk-taking. One way of avoiding risk and situations of uncertainty has been the creation and maintenance of business networks, kinship and friendship ties, supported by shared membership of organisations such as the Grandes Ecoles, which are, as MacLean (2002) suggested, the source of power in French business. This is an interesting aspect for this study given that all entrepreneurs who participated in this research have a Grande Ecole background.

A lack of entrepreneurial values

In France we are confronted with a lack of acceptance of entrepreneurial values and entrepreneurship in French society, although Fayolle, Hernandez & Séricourt (2005) highlighted that change is on its way involving a greater awareness of the importance of entrepreneurship and enterprise creation for the French economy. Yet, progress is slow and as Carayannis, Evans & Hanson (2003) argued, traditionally French society wants its children to enter ‘noble’ professions, i.e. it is acceptable to become a doctor or lawyer, but certainly not an entrepreneur. Furthermore the fear to fail seems to dominate and paralyse many entrepreneurial initiatives which may, as Jacques Attali commented, be rooted in the education system that does not teach how to manage failure (Masclot 2003). An unsuccessful French entrepreneur would not only lose material possessions, but also self-esteem, professional opportunities and possibly his well established place in French society (Carayannis, Evans & Hanson 2003).

Furthermore, as Carayannis, Evans & Hanson (2003) emphasised, French culture seems to equate creating an activity with the destruction of the normal pattern of wealth distribution in a collectivist society. In particular the idea that an individual and not the nation as a whole would benefit from this creation seems to be ill received. Arguably some of this thinking may be rooted in Jean-Jacques Rousseau’s *Social Contract*, published in 1772. Rousseau was interested in how individual citizens with their individual needs could live together in harmony within a community, within society. He advised that individuals should neglect their natural, possibly harmful inclinations (*le moi humain*) and instead support the ‘general will’ (*la volonté générale*) of the community (*le moi commun*), which would not allow for different points of view (for a more detailed discussion see MacLean 2001).

Furthermore, entrepreneurship is perceived as a predominantly Anglo-Saxon idea, i.e. imported, hence inappropriate for French society (Carayannis, Evans & Hanson 2003). In addition, it has also been argued that there are not enough well-known entrepreneurial role models, which is understandable, given the unsympathetic environment in which entrepreneurs seem to exist. Against this cultural background being an entrepreneur and enterprise creation may not be the easiest tasks in France.

The nature of the French finance sector

Another aspect that has arguably impacted on entrepreneurship and enterprise creation is the nature of the French finance sector, which underwent major change in the 1980s with a complete reform of the banking sector and a new approach that shifted the emphasis from reliance on debt towards equity as a source of external finance (Gordon 1993). The concentration in industry, as discussed earlier, was followed by a concentration in the banking sector with many local banks disappearing. Following a major crisis in the 1980s, most of the banking sector was nationalised in 1982, which gave the state control of over 80% of both loans and credits (Gordon 1993). Under the right wing Chirac government of 1986 a privatisation wave was supposed to hit the industry, yet only three banks Société Générale, Paribas and Indosuez reverted to the private sector. As Gordon (1993) pointed out, French banks do not have the same close relationship with business and industry as German banks.

Given the long history of a nationalised banking system French banks have had trouble developing an understanding of entrepreneurship and enterprise creation. As a result, Fayolle (2007) emphasised that start up capital is very difficult to get in France and that it is in particular friends and family that contribute to a venture, which is an interesting aspect for this study.

An elitist education system

Another factor that may work against entrepreneurship and enterprise creation is the French elitist Higher Education system which is characterised by a tri-partite organisation with universities, Grandes Ecoles and other Higher and Further Education institutes. Some of the oldest Grandes Ecoles such as the Polytechnic and ENS were established during the French revolution, i.e. in 1794 and 1775 respectively (Maclean et al. 2006). These Grandes Ecoles are very prestigious establishments and represent avenues to the highest social positions. However, most recently the Grande Ecole system has been criticised as it has ostensibly contributed to the production of a knowledge elite whilst at the same time justifying the position of that elite at the top of the societal pyramid (Maclean et al. 2006).

David (1994, p. 205) described the Grandes Ecoles as ‘carriers of history’ as “many organisations and institutions have evolved into their present forms from recognisably similar structures that came into existence at some time in the past to satisfy some important social purpose”. This suggests that the historical development of the Grandes Ecoles is significant insofar as they have often been carriers of both national and regional policy initiatives. Given

the focus of French government support on large enterprises in particular after the Second World War these Grandes Ecoles have been charged with providing managers for the state-run conglomerates. However, the recent government interest in entrepreneurship and enterprise creation has given the Grandes Ecoles a new role in promoting entrepreneurship (European Commission 2002).

As this research investigates entrepreneurial ventures of Anciens from a French Grande Ecole it is important to bear this context in mind.

Having presented the different obstacles to entrepreneurship in French society the following section will illustrate the different solutions entrepreneurs have sought.

Different solutions to dealing with a system hostile to enterprise creation

Be surrounded with high-quality of ties in network

Whereas authors such as Borgatti et al. (1998) have emphasised the importance of the compositional quality of a tie for firm outcomes, little attempt has been made to date to actually define the quality of ties. Although the analysis of the interview data and the repertory grids has suggested that the diversity of the ties at the pre-organisation stage is very limited, I would like to argue that the quality of the ties is indeed very high. Having analysed the different ties in this study it becomes obvious that both educational and professional background are very important indicators of the quality of the ties involved in the entrepreneurial networks. There were a large number of entrepreneurs such as E, NF, JMB, NF, GK, BS, YC, R, LS, MB, P & G who involved former employers, former colleagues and former fellow students in their entrepreneurial networks. Given that all entrepreneurs, except for the very young ones, MB & AL and P & G, created in an area of their expertise where, very often, they had spotted an opportunity, it is possible to say that they surrounded themselves with the right amount of human capital to succeed in the early stages of the entrepreneurial start-up. A significant number also involved Anciens in a variety of roles such as friend, but also as somebody offering sought-after competences. PP, for instance, involved XD who happened to be an Ancien, an entrepreneur and a friend. Similarly, JMB had kept in touch with MD, who happened to be a former colleague, friend and entrepreneur; and NC who offered the attractive combination of being an Ancien, friend and fellow entrepreneur. This multiplexity of ties is a strong indicator of the high quality of the ties

found in these networks. These entrepreneurs possess a high level of human capital; they graduated from one of the top ten Grandes Ecoles in France and some of them also acquired a further degree from institutions such as Harvard. In addition, the majority of them, except for the very young ones, had significant professional experience. The findings show that the high quality of entrepreneurial human capital also find a reflection in the equally high quality of the network ties.

This section has highlighted the importance of creating in an area of expertise involving Anciens who can offer ties characterised by a multiplexity of qualities which assist in coping with the potentially hostile system.

A purpose-driven approach to network creation

Hite & Hesterly (2001) theoretically explored the changing nature of ties in the first two phases of the organisational life cycle, i.e. emergence and early growth. They suggested that firm networks evolve from close cohesive, identity based to more calculatively-based ties as the firm evolves from emergence to early growth, i.e. ties become more calculative in nature throughout the venture development process. The thematic analysis of the interviews in this research has suggested that some of the entrepreneurs viewed their network and their networking efforts in a highly calculative way. In fact, some of the entrepreneurs emphasised the purpose-driven nature of their contacts. In fact, E's case highlights that she clearly distinguished between people who can advance her entrepreneurial venture and those who cannot. As E pointed out,

But you cannot take anybody's advice (mais après on ne peut pas prendre tous les conseils de tout le monde (interview with E on 06.07.2006).

In the same interview E speaks about a '*réseau utilitaire*, i.e. a utilitarian network and non-challantly comments: *We use each other* (*On s'utilise*).

She cannot just accept anybody's advice, she has to make decisions about who to work with and she prioritises. In a similar vein R who set up a business in the financial services sector concluded that there is always a reason why he contacts people, either somebody had given him the name, or because they went to the same school together. As he explained during the interview:

Because these are the people that I contact. Finally there is always a first reason for the contact. Either this is a person who has given me his name, or it is the fact that we are from the same school... which is common... which creates the link. (Parce que c'est des personnes que je contacte... Enfin, il y a quand même une première raison du contact. Donc soit c'est une personne qui m'a donné son nom, soit on a le fait d'avoir fait la même école etc. en commun. Ce qui fait que le lien...)

RK: *Is this a bit by coincidence?* (C'est un peu par hasard?)

R: *Not completely. This means that the affective link is not negligible either. It is intermediary.* (Pas complètement. Ce qui fait que le lien affectif n'est pas nul non plus. Il est intermédiaire) (interview with R on 21.11.2006).

R's comment underlined that entrepreneurial contacts are purpose driven. Contrary to Hite & Hesterly (2001), however, this calculative interest does not start at a particular phase in the creation process, but seems to be an integral part of the early network dynamics at the pre-organisation stage. As GK pragmatically underlined, whereas the entrepreneur may be in contact with *many* people there may only be a selected number who are actually involved in the entrepreneurial project.

In an interview with P & G in December 2006, I was checking the contacts that were still 'alive' from earlier grids established throughout the year. One of the key issues that emerged from this discussion was '*le besoin*', the need' for somebody, an aspect which would determine whether the two young entrepreneurs would contact a person for advice and assistance or not. As the two founders explained, they had not been in contact with one particular member of their network members for quite some time as there had been *no* need to do so. However, with this person now creating a business himself, a new link was in the process of being established. As P & G expanded in the interview on 13.12.2006,

No, because we did not need him, but we have met him not that long ago during a conference, we had a good discussion. He is going to create his own company too; this is a link that is in the process of getting established. (Non parce qu'on n'a pas eu vraiment besoin de lui mais on l'a quand même croisé il n'y a pas longtemps dans une conférence, on a bien discuté. Il commence à créer une entreprise aussi, donc c'est un peu un lien qui se fait).

In the same interview we discussed the idea of different people being organised in circles around the entrepreneurs. The closer the circle the closer the people to the founders. P & G had already distinguished between a '*cercle protecteur*', a protective circle which comprised themselves and their two mentors. This inner circle was surrounded by circles of people who were less involved in the project. As P & G explained,

In fact, in this circle there are rather people who you can contact when you need them. They are not really in the network. (En fait, dans ce cercle-là, c'est plus des personnes qu'on sollicite à partir du moment où on en a plus ou moins besoin, en fait. Ils ne sont pas dans le réseau...).

RK: *This means when you need him.* (C'est-à-dire que si on avait besoin de lui).

P & G: Obviously. He is no longer involved as... (Clairement. Il ne s'implique pas parce que...)

These comments show that entrepreneurs critically evaluate who they liaise with, who they contact to satisfy their needs. Very often these needs refer to different types of advice or assistance required, money was rarely mentioned by any of the interview partners, and banks and shareholders only played a role in a few cases such as that of CB, PP and AC. This purpose-driven approach to ties is very similar to Steier's (2001) suggestion that entrepreneurs identify key clusters of resources and create or maintain relationships with these players who represent key conduits to those resources. As a result, redundant contacts, contacts that are no longer needed, are eliminated from the network. This selective focus on some ties, but not on others, also coincides with the systematic networking attempts of some of the entrepreneurs, which I will illustrate in the following section.

Develop a systematic approach to network building

Closely related to the idea that some entrepreneurs purposefully select their network ties to cope with adverse conditions to start-up is the finding that some take a very systematic approach to network building. NF, for instance, employed an apprentice specialising in Marketing to systematically create a network of potential clients for him. He himself organised lunches and dinners over a couple of months, with people from his private and professional network. These meetings had two objectives: to get feedback on his entrepreneurial idea and add one or two new contacts to his network, thus building the potential for new clients. He even established a typology of people, consisting of those who could help him in particular with the marketing part of the business and those who could advise on the technical side. As he explained in an interview on 01.03.2006:

I did two things, either I sought direct contact with people I knew from my private network, or from my professional network, I had lunch with them, I organised lunches because these are people who work, who do not have much time. So I had lunch with them and I explained them my entrepreneurial idea. There were two objectives to this: the first was to get their feed-back, to know what the people think; whether it is good or bad idea and how I could better define the positioning of the offer and the second objective was to obtain one or names of people who could be potential clients or people from the industry who could give me their opinion. Each time when I had lunch with somebody I had this double objective. You also have to know that you are really on your own when you are creating your company. You are at home, in the morning you get up, you are at home, in the evening you go to bed, you are at

home, you spent your life at home, and this is not easy. This is quite bad when you are used to having a life with a rhythm that is guided by office hours. It is not easy to spend your life at home (J'ai fait deux choses, soit du contact direct avec des gens que je connaissais, soit issus du réseau privé, soit issus du réseau professionnel avec lesquels je déjeunais généralement, j'organisais des déjeuners parce que c'est des gens qui travaillaient, qui n'avaient pas forcément du temps. Donc j'allais déjeuner avec eux et je leur exposai l'idée que j'avais de l'entreprise. Et avec pour objectif, j'avais deux objectifs à chaque fois, le premier c'était d'avoir leur feed-back, qu'est-ce qu'ils en pensent: est-ce que c'est une bonne ou pas une bonne idée ou comment est-ce que je devrais affiner le positionnement et l'offre et un deuxième objectif c'était d'obtenir un ou deux noms de personnes qui pourraient soit être des futurs clients ou soit des gens qui sont un peu dans ce business là ou me donner leur avis. A chaque fois j'avais ce double objectif dans le cadre d'un déjeuner. Il faut savoir aussi que quand on crée son entreprise on est très seul. On est chez soi, le matin on se lève, on est chez soi, le soir on se couche on est chez soi, on passe sa vie chez soi. C'est un peu terrible quand on a l'habitude d'avoir une vie qui est rythmée par les horaires de bureau, quand on passe sa vie chez soi c'est pas facile.

He continued:

Well, so I met people who could either inform me about the marketing part – the positioning, or people who could teach me about the technical side – the offer. Great. So I had two types of people who I met. (Alors donc, et là je rencontrais soit des gens qui pouvaient me renseigner sur la partie plus marketing – positionnement, soit des gens qui pouvaient plus me renseigner sur la partie technique - offre . D'accord. Donc j'avais les deux typologies de personnes que je rencontrais).

NF's strategy proves to be a successful, as he obtains his first client C (a big international supermarket chain) through a network tie E who advises NF to ring this person on his behalf.

Looking at LS we find a similar highly systematic and methodological approach to networking. As he explained in the interview on 25.08.2006,

What I really do in a very methodological way, is the management of relationships. With very simple messages, which the people can spread very easily. And there is a very fine follow-up of who has presented who to us. What is, today, the heart of our information system. The first information that I jot down next to the name and first name of somebody, before his title, is through whom I got to know him (Ce que j'ai utilisé de manière très méthodique, c'est la gestion des relations. Avec des messages extrêmement simples que les gens peuvent diffuser facilement. Et avec un suivi très fin de qui nous a présenté qui. Ce qui, aujourd'hui, est le cœur de notre système d'information. La première information importante que je note à côté du nom et du prénom de quelqu'un, avant son titre, c'est par qui je le connais).

RK: *This means that you have a list of contacts that you can develop like a chain.* (Donc tu as une liste des contacts que tu peux développer presque comme des chaînes).

LS: Yes (Oui).

RK: *So you would say that you are very methodological entrepreneur ?* (Donc tu dirais que tu es un entrepreneur très méthodique à cause de ça?)

LS: *Yes, very structured.* (Oui. Très structuré).

As LS emphasised, he systematically manages his network, building up information about people from scratch and then staying in touch. He sends simple messages out that again could be passed on very easily from person to person, again widening the network and increasing the opportunities for new contacts. For LS this is part of being an entrepreneur, he

describes himself as a very methodological entrepreneur and he is certainly very structured in his approach to networking.

Underlying LS's systematic approach to networking is his own network philosophy. He distinguishes between formal networks such as the network of the Anciens at the French Management School and the former colleagues at the consultancy, D, and informal networks, which are relational networks. For him there are only two ways of creating a network, either you meet people and you systematically stay in touch with them or you meet them and forget about them immediately. Obviously the latter would be ineffective in his eyes. For LS networking is about creating a durable relationship with somebody. His vision of the network is such that he sees himself as the linchpin between different networks and he has merged different networks with his personal relationships. He explained his philosophy as follows:

There are structured networks and there are informal networks. The structured networks are those groups which acknowledge themselves as a network. The former students of the ESC, the Anciens, for instance. The former employees of D. The people who belong to a religious community. Those who regularly go to conferences. Well, in an institutional way there are groups, associations which are networks. And after that you have informal networks. These are all relational networks. There are two ways of building a network. Either you meet people and when you leave them you have already forgotten about them: Or you remember them and you create a relationship with them. The start of a network is creating a durable relation with somebody. What concerns my person I would not say that I have a network but that I am in the middle of different networks which I merged with my personal relationships. But this is, after all, a vision of life which is almost philosophical. Either you are at the centre of the world or you have a network around you (Il y a des réseaux structurés et il y a des réseaux informels. Les réseaux structurés, ce sont des groupes qui se reconnaissent eux-mêmes comme des réseaux. Les anciens de Sup de Co. ... Les anciens de Deloitte. Les gens qui appartiennent à une communauté religieuse. Les gens qui participent régulièrement à des conférences. Voilà. Donc là il y a déjà de manière institutionnelle des groupes, des associations qui sont des réseaux. Et après il y a les réseaux informels. Ce sont tous les réseaux de relations. Il y a deux manières de faire. Soit on rencontre des gens et, dès qu'on les a quittés, on les oublie. Soit on se souvient d'eux et on crée une relation avec eux. Le début d'un réseau, c'est créer une relation durable avec quelqu'un. En ce qui me concerne, je ne peux pas dire que j'aie un réseau. Je peux dire que je me retrouve au milieu de différents réseaux que j'ai fédérés avec mes relations personnelles. Mais, après, ça, c'est une vision presque philosophique de la vie. C'est-à-dire, soit on est le centre du monde et on a un réseau autour de soi).

LS is, however, not the only entrepreneur who has developed his own philosophy of networks and networking. During my first interview with BS on 15.05.2006 he showed a very high awareness of the different types of networks he engaged in:

I have several networks. I have a first level of Anciens and these are not the former students of the ESC Rouen, but these are the former colleagues of AA, which is a company with a very

strong culture, and those who have left AA are like a business card, and it is true that when you meet in a consultancy or with other consultants, the fact that you are a former employee of AA gets noticed immediately. Thus there is a type of network which is very strong and which is rather astonishing... (J'ai plusieurs réseaux, j'ai un premier niveau d'ancien et ce sont pas les anciens de Rouen, ce sont les anciens de AA, c'était une société où il y avait une forte culture, et finalement les gens qui sont partis de AA, c'est une sorte de carte de visite, et c'est vrai quand on se retrouve vers d'un autre cabinet ou d'autres consultants, le fait qu'on soit un ancien d'AA va tout de suite apparaître à un moment. Donc il y a une notion de réseau qui est assez forte et qui est plutôt étonnante).

He continued:

Well this is the first level of the network and my second level are my direct clients for whom I have already worked, as a consultant. Well these are the people for whom I have already worked and who have appreciated the work that I did and to whom I can make commercial propositions. I can activate the first network immediately, as this very informal and it is not the network of my present employer, thus I can activate it immediately without having a conflict of interest with my present employer. My second network is a bit more difficult as I cannot take clients away from my present employer and the problem is that my present employer is my third network. My fourth network are acquaintances, which can bring business, this could be a business network. (C'est un premier niveau de réseau, et mon deuxième niveau de réseau c'est mes clients directs ceux pour lesquels j'ai déjà travaillé mais en temps que prestataire. Et donc voilà, ce sont des gens pour qui j'ai travaillé, et qui ont apprécié le travail que j'ai pu faire, et à qui je peux faire des propositions commerciales... Alors le premier niveau de réseau je peux l'activer immédiatement, parce que c'est vraiment sur une chose informelle et qui est pas le réseau de mon actuelle employeur, donc je peux l'activer immédiatement sans qu'il y ait collusion avec des intérêts de mon employeur actuelle. Mon second réseau je ne peux pas..., car ce sera piquer des clients à mon actuel employeur et le problème est que mon employeur et mon troisième réseau... Il y a un quatrième niveau de réseau donc les connaissances qu'on peut avoir. Qui peuvent à un moment apporter des affaires, qui peuvent être un réseau d'affaires).

This section has highlighted the systematic and purposeful approach to networking these entrepreneurs have taken in order to start their business successfully, some would even establish a typology of people in their network and a real methodology sending simple messages to people together with a fine follow up assuring the continuity of the relationship and the possibility of building a durable relationship. The examples cited here have shown the entrepreneur as the linchpin of different types of networks. The research has also shown that entrepreneurs make special deals with family members to obtain necessary competences and finance for the start-up.

Risk avoidance strategies

The role of the spouse

Similar to the existing literature (see for instance Brüderl & Preisendorfer 1998) that suggests that entrepreneurs integrate a spouse or their life partner in an entrepreneurial project because of the active help they can provide, we find a number of cases in this study where the partner was involved due to their competences. In the case of PL and LS both wives take on

responsibilities in the business the husbands want to create. Given LS's wife's competences in marketing her role was primarily of a commercial nature, as she brings in clients. In comparison, PL's wife helped with the accounting side of the business, her contribution to the project was very operational. In return for their labour both women get later offered a share in the business (interview with PL on 10.4.2007), which is similar to the arrangement AC makes with his brother-in-law, which I will discuss later. In the interview with LS, the latter emphasized in particular the idea of an operational/relational contribution of both women which resulted in the participation in the capital. Allocating a share of the company capital to the women, was for LS

“our way of saying, of recognising their contribution. It is relatively unusual to do this, it is very rare. (C'était une façon de dire, de reconnaître qu'elles avaient une contribution à nos côtés. C'est assez rare de faire ça. C'est rare)

RK : *So this was about their contribution to the project? (Leur contribution au projet?)*

LS : *Yes their support: for organising meetings on Sunday afternoon, for coming home late in the evenings. (Oui, leur soutien. Pour pouvoir faire des réunions le dimanche après-midi, pour pouvoir rentrer tard le soir).*

AC's case is another illustration of an entrepreneur who recognizes the contribution family members make to the entrepreneurial project, but also the importance of the family in avoiding getting caught up in the constraints of the French finance system. As AC explained:

And the last point was that my other brother-in-law, who is very interactive, created my website, I did not have any graphic designers, no developers, nothing at all. I came to an agreement with him, I gave him 10% of my capital and in exchange he created my first websites free of charge. (Et le dernier point c'est que j'avais mon autre beau frère, qui est très interactif, qui m'a fait mon premier site, j'avais pas de graphistes, pas de développeur, j'avais rien du tout, j'ai passé un accord avec lui, je lui ai donné 10% de mon capital et en échange il me faisait les premiers sites gratuits) (interview with AC on 06.07.2006).

Similar to LS and PL, AC's case is very interesting as he agrees on a deal with his brother-in-law which offers 10% of the capital of AC's company in exchange for his services. Offering this participation in his business AC makes sure that the other party stays motivated, as his brother-in-law has a vested interest in doing a good job given that he owns a share in the business.

Different avenues for finance

In line with existing literature such as Birley (1985) this research has shown that very few entrepreneurs went out to seek formal financing for their entrepreneurial venture. As discussed

earlier the French banking system may potentially be hostile to an entrepreneur seeking finance. In fact, the data analysis has shown that there are four ways of obtaining finance: either through

- family/friends as financiers
- concours (high tech and innovative business competitions)
- the French legal system (Loi Dutreil)
- a bank

In this study there were a number of entrepreneurs who preferred to ask family or friends for financial support. BS invited NFi to join him in his entrepreneurial project in order to comply with legal requirements but also to obtain the necessary finance for the venture. Similarly, AC raised some finance from his family in the early stages of the development of his Internet start-up. In addition to the funding obtained from a local bank in the early stages of their entrepreneurial venture CB and PP involved four shareholders, all friends of PP, in their venture. As CB explained in an interview on 23.08.2006, these were personal friends of his co-founder PP, who were professionals and entrepreneurs themselves. As CB remembered, these people did not only provide finance to the project, but also valuable feedback, competences and their entrepreneurial experience. Very important was also the aspect of discussion which meant that the two founders felt less isolated in their work. None of the shareholders was actively involved in the operational side of the business. As CB explained further:

We took external advice regarding shareholders, since the beginning, this means at the beginning we had the majority but there were other shareholders who were people who brought some capital as they were amused by the concept or they were friends or because they knew the type of activity, even though it did not necessarily have much to do with what we were doing and who also had an experience or were entrepreneurs themselves as two at least of them had created their own business (On a pris des conseils extérieurs plutôt au niveau de l'actionariat de départ c'est-à-dire qu'au début on fonctionnait majoritaire mais on avait d'autres actionnaires qui étaient des gens qui apportaient du capital parce que le concept les amusait ou par amitié ou par connaissance avec des activités n'ayant pas forcément grand-chose à voir avec ce qu'on faisait et qui avait aussi, bien évidemment, une expérience ou de créateurs eux-mêmes parce que deux d'entre eux, au moins, étaient des créateurs d'entreprise).

RK: *So they were with you right from the start?* (Ils étaient déjà là au début ?)

CB: *Yes, from the moment we put the company capital together. We had to create an S.A., Société Anonyme and we needed a minimum amount of capital for this type of company, which was relatively high. So we invested effectively X. We involved further associates who brought some percentages each time and who also brought their competences to the venture, their experience and their recommendations. This allowed us to have some feedback, to discuss with them the projects we could realise. With hindsight this was on the one hand a support, a support as we felt less isolated but you should not be lured into false security, as the person who takes the decisions who directs the strategy is always the one who is operational who lives it...*

These people had their activities and did not have any time to consecrate except for a sporadic involvement when there was an 'Assemblée Générale' or we consulted them about very precise points but they themselves were not operational in the structure of the business (Oui, au moment de la constitution du capital de la société. Il a fallu constituer un, on a créé une S.A. à l'origine. Société Anonyme, et donc dans une S.A. il y a un capital minimum qui est assez important. Pour situer ce capital, nous on a apporté, effectivement X Euros on a intégré d'autres associés qui ont apporté quelques pourcents à chaque fois et qui on apporté en plus leurs compétences, leurs vécus et leurs recommandations éventuelles. Cela permettait d'avoir un feedback, de pouvoir discuter avec eux des projets qu'on pouvait avoir. Avec le recul, ça a été à la fois une aide, une aide parce qu'on se sent un petit peu moins isolé, mais à la base il ne faut pas se leurrer, la personne qui prend les décisions, qui oriente la stratégie de l'entreprise c'est quand même celui qui est dans l'opérationnel, qui vit le... Ces gens avaient, effectivement, leurs activités et n'avaient du temps à consacrer que ponctuellement quand il y avait une Assemblée Générale ou les solliciter sur des points très précis mais eux n'étaient pas opérationnels dans la structure).

Similar to PP and his partner CB who involved friends of the former to get financial help to start the business, BS involved NFi as a silent partner who supplied the necessary finance but did not actively engage in the venture. As BS pointed out in an interview on 28.7.2006, NFi was equally important from a legal point of view as the former bought the parts of BS's first associate. BS was legally obliged to have a second person to run an SARL.

As the analysis in this section has shown the entrepreneur prefers to rely on private funding either through family or friends. Much of the reluctance of the entrepreneurs to involve banks in their entrepreneurial project is reflected in one of E's comments.

French banks lend you money if you have enough already (*Les banques françaises vous pretent de l'argent, si vous en avez déjà assez*) (interview with E on 06.07.2006).

When she and JT went to see their bank, they already had substantial capital available, as they both owned property. The bank was prepared to lend them exactly the same amount that they owned already in their property. Hence she concluded that French banks give you money if you have money already.

It is very important not to neglect the role of the spouse in providing financial security. JMB's case illustrates the situation further; his future wife-to-be is also an ESC graduate, she works for a major Internet provider based in Paris. As JMB highlights, she is probably the only person in his network who is not passionate about rugby. She was not involved in the creation process other than in a consultative role and in terms of information exchange. The fact, however, that she is in stable employment is regarded as an important aspect. As JMB expanded,

But it is rather the stability of her employment which is important for the risks I take. That's it really. But many people said it the other night (01.03.2006 – launch of the Club des Entrepreneurs of the ESC Rouen in Paris), they all said, one way or another, that the employment of their wife is their insurance (Mais surtout parce que la stabilité de son emploi est importante dans les risques que je prends. Voilà. Mais, l'autre fois, tout le monde l'a dit à la soirée. Les créateurs d'entreprise, ils témoignaient tous de ça. Ils racontaient tous, de toute façon, que leur assurance, c'était le boulot de leur femme (interview with JMB 18.05.2006).

The following section will highlight the importance of 'concours', innovative company competitions for starting a venture.

Concours

A very important avenue for accessing necessary finance are the so-called 'concours' in France, these are competitions aimed at helping young innovative companies to obtain necessary finance to get their business off the ground. As AL (MB's partner) of an innovative business that was created with focus on environmental focus, explained on 17.08.2006:

This all started with a fairly unimportant competition which is called 'Club 92', 92 is the locality of Hauts-de-Seine. It is an association which depends on the 'Conseil général' and finances projects up to 1,000 Euros. So you have an idea, which can be...not necessarily an idea to create a company, this could be an original idea about a world tour, a photo exhibition, a cultural event, there are many ideas, one of them to create a company. So we started in December 2003, and we presented our idea to Club 92. Everything else followed on from there. There were many competitions, we obtained a good 10 prizes in 2004 (Ça a commencé par un tout petit concours qui était Club 92. Le 92, c'est le département des Hauts-de-Seine. Donc c'est une association qui dépend du Conseil général et qui finance des projets à hauteur de 1.000 euros. Donc vous avez une idée. Ça peut être... Ce n'est pas forcément une idée de création d'entreprise. Ça peut être l'idée d'un tour du monde original etc. Enfin, ça peut être une expo photos, un événement culturel etc. Il y a plein d'idées différentes dont la création d'entreprise. Donc on a commencé en décembre 2003 et on a présenté notre idée au Club 92. Après ça s'est enchaîné. Il y en a eu beaucoup. Mais, bon, je ne sais pas, on a dû faire une dizaine de prix en 2004).

Later AL and MB's company won the highest subsidy available in France, the subsidy of the Ministry of Research in the category of creation and development, which amounted to 330,000 Euros. Similar to AL and MB, P & G won a number of innovative company competitions, particularly in Haute Normandie where the business is based, which also underlines the importance of the proximity of the business to local business support organisations and the necessity to embed the venture in the regional locality.

The French legal system facilitating financial survival during start-up

Entrepreneurs such as GK, NF and JMB negotiated their departure from their employers to create their own business. They enjoyed a certain financial security as they could benefit

from French legislation that supports unemployed people in their venture creation process. As NF explained his situation on 01.03.06:

There is a system in France, I was very lucky, I decided to work on the creation in November 2001 and from February/March 2002 onwards there was a new law which allowed an entrepreneur to continue to receive a major part of their unemployment rights whilst creating their own company. So the fact that I was unemployed was a good opportunity to create their own business. On the one hand from a financial, on the other hand from a time point of view. This gave me a certain financial security (Il y a un système en France, j'ai eu beaucoup de chance enfin j'ai décidé de travailler sur la création en novembre 2001 et à partir de février/mars 2002 il y a une nouvelle loi qui est passée qui permettait aux créateurs d'entreprise de continuer à percevoir une partie, la majeure partie de leurs droits de chômage, pendant qu'ils créaient leur entreprise. Donc le fait de se trouver en chômage était une bonne opportunité pour créer une entreprise. D'une part au niveau financier d'autre part au niveau du temps qui s'est ouvert. Ca m'a donné une certaine sécurité financière).

Hence by being unemployed entrepreneurs such as NF found a way of minimising risks inherent in starting a venture.

A further example was provided by JMB whose employer, MD, an entrepreneur himself, wanted to give JMB a helping hand and facilitate his start-up. Thus he made JMB aware of the benefits of a French law which awards the unemployed benefits (ASSEDIC) for a duration of 18 months. He laid off JMB to benefit from this law which effectively helped JMB create his own business, as he had a certain financial security for the time indicated. As JMB emphasised in this extract taken from the interview on 25.08.2006, MD was among the triggers for the creation. I will come back to JMB's and MD's relationship later.

As we can see in these two examples the legal context acts as a trigger and facilitator for enterprise creation, securing both the financial side of the start-up, but also providing time to actually create.

Need for reflexivity and for reflection

Another way of coping with a system that is potentially hostile to entrepreneurship and enterprise creation is the systematic integration of reflective ties, i.e. people with whom the entrepreneur could discuss issues related to the creation. JMB, for instance, involved a couple of friends, those with whom he could discuss such an issue, but it was certainly not something he could discuss with 30 people, as he emphasised in an interview with him in August 2006.

Well there were three or four close friends. Those with who you can talk about these things, It is not something that I would not discuss with 30 people. The phase of reflection, I have kept it to myself, honestly (Enfin, mes trois, quatre amis proches, on va dire. Ceux avec qui on peut aborder ce genre de sujet-là. Voilà. Enfin, c'est pas quelque chose que j'ai raconté à 30 personnes. Ma phase de réflexion, je la gardais un peu pour moi, très honnêtement) (interview with JMB on 18.05.2006).

The idea of reflexivity and need for reflection also reoccurred in the cases of YC, JMB, NF, JT and GK. Furthermore this research identified a link between network size and the need for reflexivity in the people that surround the entrepreneur which is indeed a very interesting finding as such reflexivity seems to be a vital ingredient at the pre-organisation stage.

Creation in former profession

Similar to INSEE (2008) this study found that individuals created their venture in the sector of their former activity, which may be a further reason why the networks in the entrepreneurial start-up phases were relatively small. JMB, for instance, chose to create his own company in the same field in which he had been working for more than 6 years, he knew the people, he knew the job. As neither his friends nor his parents worked in the same sector, he concluded that their involvement could not be very deep. Hence he preferred to keep his reflections to him and not share them.

JMB: My reflections are very much linked to my activity. ... to the sector of activity which only I know, I know the people. In fact, my friends do not work in this sector, my parents neither. Thus this could not be a very deep involvement. This is understandable, this is not very complicated, but I did not really involve them. It was my reflections, which I did not share, let's say. As this was in relation with my profession there was not much to think about, in fact. You have to be honest, I just continued in the same profession, I passed from employee status to the entrepreneur status, but the profession remained this same. My daily life, it was, the meetings I arranged, and the commercial canvassing was exactly the same. In addition, my first client was my first employer, and I also had the same clients again...Finally, that's it. Well, there was no real reflection about the company strategy. There was no... The business activity, let's say, was well known as it had been my (former) profession. (Parce que, en fait, ma réflexion, elle était déjà très liée à l'activité... au secteur d'activité que moi seul, je connais dans ces gens-là. En fait, mes amis ne travaillent pas du tout dans ce secteur d'activité-là, mes parents ne sont pas du tout dans ce secteur d'activité-là. Donc ça ne pouvait pas être une implication très profonde. Enfin, je... Ça se comprend, il y a rien de très compliqué mais c'était juste que je les impliquais pas plus que ça, quoi. C'était vraiment ma réflexion à moi. C'était pas très partagé, quoi, on va dire. Voilà. Parce que c'était tellement en rapport avec mon métier qu'il n'y avait pas beaucoup de réflexion à mener, en fait. Il faut être honnête, j'ai continué le même métier mais je suis passé du statut de salarié au statut de créateur d'entreprise. Mais le métier était le même, hein. Mon quotidien, il a été... Les rendez-vous que je faisais, la prospection commerciale est exactement la même. D'autant plus que mon premier client était mon premier employeur, en plus je retrouvais les mêmes clients... Enfin... Donc voilà. Donc, en fait, c'est pour ça qu'il y a pas eu une réflexion de stratégie d'entreprise. Il y a pas eu... L'activité de l'entreprise, disons qu'elle était bien connue puisque c'était mon métier) (interview with JMB on 18.05. 2006).

As JMB's comment show it is important to stay in your once chosen profession when creating as the business activity itself was very well known to him which provided additional security in the start-up phase. He could be confident to have the right competences and the necessary network to create his own firm.

Involving like-minded people

As mentioned earlier this research employed repertory grids which are the practical tool of the Personal Construct Theory (PCT) developed by the practising psychologist George Kelly (1955) which aims to illicit concepts defined in the participants' own words in a systematic way and enables comparison between construct systems. Personal construct psychology is a theory of individual and group psychological and social processes that takes a constructivist position in modelling cognition (Aranda & Finch 2003, Fransella 1988). Kelly's key question was: *How does a person, consciously or unconsciously, construe the world?* (Fransella 1988). This theory provides a fundamental framework for both theoretical and applied studies that seek the acquisition of knowledge, aim to measure attitude, personality and engage in cognitive mapping (Aranda & Finch 2003). As Fransella (1988) comment, Kelly's demand for the individual to be actively involved in anticipating events from the *inside out* was at his time revolutionary given the ongoing struggle against the then dominant paradigm of complete determination from the *outside in*. Kelly's key postulate is that a person perceives the world in terms of whatever meanings this person applies to it. Given that human beings are free agents to make meaning of their realities this implies that perception depends not only on the presented stimulus but also on internal hypotheses, expectations and stored knowledge. The aim of PCT is to understand each person's unique view of the world by means of exploring their thoughts, feelings and beliefs (Cooper 1998). For further information about repertory grids within the context of this study see Klapper (2008).

The research has shown that entrepreneurs tend to assess their network ties in terms of whether they are entrepreneurs themselves, have an entrepreneurial spirit, possess entrepreneurial characteristics, share the same vision and have the same educational background, thus sharing the same understanding of enterprise (for further information see Klapper 2008). This suggests that the entrepreneur seeks out network ties who are like-minded operating within a similar, or the same, '*cadre référentiel*'. One consequence of

perceiving ties as like-minded is a certain level of identification between the two parties. The analysis has suggested that we can distinguish between two types of identification:

- the identification of the individual tie with the entrepreneur due to similar entrepreneurial characteristics that generate like-mindedness

and

- the identification with the entrepreneur/tie as (s)he belongs to the network of the Anciens and hence to the closed circle of graduates of the French Grande Ecole.

The identification of a tie with the entrepreneur is a powerful driver for network ties promoting the entrepreneurial venture, as JMB's case shows. JMB underlined, in particular, the importance of MD, the president of the club P, JMB's last employer, for facilitating the start-up, as I already explained earlier. As JMB explained on 25.08.2006:

JMB: Well he created his first company at 20. This is very important. This is very important for his attitude towards me. When, just to complete the story, when I told him: I am employed at your place. I want to create my own company to work for the competition he did not only say yes but he even helped me. At first he made it possible for me to work part-time 50%-50% for three months. And at the end of the 3 months he laid me off so I could benefit from the ASSEDIC payments. Hence he helped me enormously. For a simple reason. He said; I created my own company. I know how hard it is. And today when I have somebody in front of me who wants to do it as well I am rather inclined to help him than to prevent him. So he helped me. He was among the triggers. (Il a été créateur d'entreprise à vingt ans. Et c'est important. Dans sa réflexion vis-à-vis de moi, c'est très important. Puisque, pour la petite histoire, quand je lui ai demandé cette chose particulière qui était de dire: "Je suis salarié chez vous. Je veux créer ma société pour travailler pour un club concurrent", non seulement il m'a dit oui, en plus il m'a aidé. Alors, d'abord, dans un premier temps, il m'a permis de faire 50-50 sur mon temps pendant trois mois. Et, à l'issue de ces trois mois, il m'a licencié pour que je puisse avoir droit au chômage. Donc il m'a donné un coup de main énorme. Pour une seule et bonne raison, c'est qu'il a dit: "Moi, j'ai été créateur d'entreprise. Je sais la difficulté que ça représente. Et aujourd'hui, quand j'ai face à moi quelqu'un qui veut le faire, je suis plutôt enclin à aider qu'à empêcher." Donc il m'a aidé. Lui, il sera dans les éléments déclencheurs, bien entendu. (interview with JMB on 25.08.2006).

JMB further expanded on this person:

He never rings me, he never asks for anything and globally he would have no influence or impact if I had not asked him to. But every time I asked him for something, he has responded and he has been very supportive, with a lot of impact and very positive. (Lui ne m'appelle jamais, ne me sollicite pour rien et, globalement, il n'aurait aucune influence ni aucun impact si je ne le lui demandais pas. Sauf qu'à chaque fois que je le lui ai demandé il a répondu présent et il a été très bienveillant, très impactant et très positif).

RK: Yes, very positive. Very supportive. And the third attribute? (Oui. Très positif. Très bienveillant. Et le troisième attribut?)

JMB: *And with a lot of impact as he has impacted the venture a lot. In terms of the creation and its development* (Et très impactant parce qu'il a eu des impacts qui ont été vraiment forts. Dans la création et dans le développement). (interview with JMB on 25.08.2006).

As we can see from JMB's comments, MD had a major impact on the success of the entrepreneurial project. Even now, years later, when JMB was contemplating selling a part of his business to take up full-time employment with a former clients this particular tie remains supportive offering the help of his lawyer to study the terms and conditions stipulated in JMB's new contract. JMB's case highlights the many ways a like-minded tie can influence the success of venture in terms of advice, providing new contacts and having a direct or indirect financial impact. MD saw a like-minded spirit in the young entrepreneur, which is very similar to NF, who pointed out in an interview on 01.03.2006 that one of his clients had recommended him to other colleagues due to a very similar rationale, i.e. identification with the entrepreneur. The following extract illustrates NF's situation:

This means that my client recommended me to some of his colleagues and this was an enormous help. Because he knew that I was in the process of creating my own company and he wanted to help me. So that it would work out. He said I am going to help you, I am going to introduce you to some great guys and I developed a lot of business with C thanks to him (C'est-à-dire que c'est mon client qui ensuite m'a recommandé à ses collègues et ça, ça a été aussi une grande aide. Parce que comme il savait que j'étais en train de monter ma boîte et tout, il a eu envie de m'aider. Et que ça se passait bien. Il m'a dit je vais t'aider, je vais essayer de te présenter des gens machin et j'ai fait beaucoup de business avec C grâce à lui).

RK: *He wanted to help you but why?* (Il a eu envie de t'aider Pourquoi?)

NF: *Exactly, he wanted to help me. In effect what was happening to him, he identified quite a bit with me. This is a guy who has about my age and he told himself and by the way to me as well that he would like to create a company. But he has a senior position at C and I think he is never going to create his own business but you never know, we will see. But he saw himself in my company creation.* (Exactement, il a eu envie de m'aider. En fait, ce qui se passe avec lui, il s'est pas mal identifié à moi, c'est un mec qui a à peu près mon âge et il s'est dit, et en fait, lui probablement, d'ailleurs c'est pas probablement il me l'a dit, il aimerait bien monter une boîte, mais bon, il a un gros poste chez C et tout, je pense qu'il ne montera jamais de société, mais on ne sait pas, on verra. Mais là, il s'est projeté à travers moi dans la création d'entreprise).

Involving like-minded people is a fairly complex concept, involving the idea of sharing 'le même cadre referential - speaking the same language, using the same terminology to communicate. Like-minded individuals inhabit the same professional habitus where they use the same language and terminology. The research highlighted the example of the Anciens who tend to assist each other with the entrepreneurial project, based on the simple understanding that they are graduates of the same Grande Ecole, as they are part of the same year group, hence their ties have proved a certain durability and stability. SLB even talks about the 'effet école'. I asked him why an Ancien he had met at the launch of the Club des

Entrepreneur on 01.03.2006, where I was present as well, had offered to help him with his entrepreneurial project. SLB responded:

Because of his fees. (Ses honoraires).

RK: *He is getting paid?* (Il reçoit des honoraires?)

SLB: *Yes, of course. But seen the way we work with him, I have the feeling it is not just that. I think that there is also the 'Effect Ecole'. There is the 'effect' people. I think he is very happy to work with us. Because he finds us clever and he believes in the project. It is a bit of all of that.* (Bien sûr. Mais, vu la façon dont on travaille avec lui, je sens qu'il y a plus que ça. Je pense qu'il y a aussi l'effet école. Il y a l'effet personnes. Je pense qu'il est content de travailler avec nous. Parce qu'il nous trouve plutôt malins et qu'il croit à notre projet. C'est-à-dire que c'est un peu tout).

RK: *So he believes in your project. He went to the same school?* (Il croit à votre projet. Il était à la même école).

SLB: *I think that the fact that we went to the same school together is very important* (Je pense que le fait qu'on ait fait la même école, ça a été important quand même).

RK: *What does this create this feeling of having been to the same school?* (Qu'est-ce que ça crée d'avoir ce sentiment d'avoir fait la même école?)

SLB: *This is exactly what I have said. You don't let anybody down who has attended the same school. It is this idea of community* (C'est exactement ce que j'ai dit. C'est qu'on ne laisse pas tomber quelqu'un qui a fait la même école. C'est cette idée de communauté).

RK: *So it is about a certain solidarity?* (Une certaine solidarité même?)

SLB: *Yes, of course* (Oui, bien sûr).

RK: *A certain ethics?* (Une certaine éthique?)

SLB: *Absolutely. That's it. It is really this idea of solidarity, yes. MLT who I don't know very well but she is ... she is very helpful. Plus she is...she is somebody who wants to do things well and who also accepts positive criticism.* (Absolument. C'est ça. C'est vraiment l'idée de la solidarité, oui. MLT, je ne la connais pas très bien mais elle est... Je la trouve très volontaire, très... En plus, elle est... C'est quelqu'un qui a envie de bien faire et qui, du coup, accepte la critique positive).

Whereas the fees the Ancien receives for his contribution to the entrepreneurial project are certainly a driver for his participation in SLB's entrepreneurial project, there is more to this than meets the eye. As SLB underlined, there is also the '*Effet Ecole*' which makes it that Anciens, who do not know each other, start working together, take an interest in the entrepreneurial project of the other person. As he explained, the fact that people went to school together means that you cannot simply let this person down. There is a type of community that exists which is governed by a certain solidarity among its members. Such solidarity can work in favour of somebody but also against him, when his behaviour does not correspond to what the community expects him to do.

Similar to SLB, R believes that the network of the Anciens can bring much to his entrepreneurial project as these ties possess certain experiences of benefit to his venture. He also pointed out the aspect of self-regulation of the network, which is a very small community with strict rules for 'correct', ethical behaviour. The community is built on trust

and credibility which stems from having the same educational background and having acquired a certain professional position. People, even though they are complete strangers, tend to give each other more time than they would normally. As R commented:

I think that these are people who can bring something to the project because they have a certain type of experience. They have followed the same course, there is a self-regulation, I think, in a group, like this, which makes it that everybody has an interest in doing the other a favour (Je pense que ce sont des gens qui peuvent m'apporter parce qu'ils ont une forme d'expérience. Ils ont fait le même parcours. Il y a aussi une autorégulation, je pense, dans un groupe comme ça, qui fait que tout le monde a intérêt à rendre service à tout le monde).

RK: *A self-regulation? What does this mean?* (Une autorégulation? Ça veut dire quoi?)

R: *This means that this is a small world and everybody has an interest in behaving perfectly. Maybe 'perfect' is not the right term, let's rather say irreproachable* (Ça veut dire que c'est un petit monde et que tout le monde a intérêt à avoir un comportement parfait. Alors, "parfait" n'est peut-être pas le bon terme. Disons plutôt irréprochable)

RK: *Is this a question of trust?* (Est-ce que c'est une question de confiance?)

R: *Yes* (Oui).

RK: *Where does this trust come from? From the fact that you attended the same course?* (Et cette confiance vient d'où? Du fait qu'on a fait le même parcours?)

R: *This is really a question of trust and credibility which comes on the one hand from having attended the same course, from their professional position and the adherence to a small network, the belonging to a common network* (Alors, c'est une question de confiance et de crédibilité qui vient à la fois du fait qu'ils ont le même parcours, de leur position professionnelle et de l'appartenance à ce petit réseau, de l'appartenance à un réseau commun).

RK: *Is this not also linked to a certain ethical behaviour?* (N'y a-t-il pas aussi presque comme une certaine éthique qui va avec ça?)

R: *Yes. I think that in a small community, in general, the person who does not respect the strong ethical rules loses his credit with the whole community. He also takes the risk of...* (Oui. Je pense que, dans une petite communauté, globalement, celui qui ne respecte pas des règles d'éthique fortes perd tout crédit vis-à-vis de l'ensemble de la communauté. Enfin, prend le risque ...)

RK: *So it is because you have the same educational background?* (Parce qu'avoir le même parcours... Bon).

R: *Yes, indeed. But in certain cases this was a long time ago... This is how it works. It is about belonging to a small network. But there is also the aspect that we went to the same school together; this is effectively something which carries an affective dimension. This means that some people, I think, are very attached to their school and they would spend a quarter of an hour, twenty minutes talking to you* (Voilà. D'autant plus que, dans certains cas, c'était il y a longtemps). C'est plutôt ça qui fonctionne. L'appartenance à un petit réseau. Il y a aussi un point qui est... Le fait d'être passés par la même école, effectivement, c'est quelque chose qui comporte une connotation affective, en fait. Ce qui fait que certaines personnes, je pense, sont attachées à leur école et, du coup, vont accepter de passer un quart d'heure, vingt minutes pour en parler).

RK: *So people would give you a bit of their time more easily* (C'est ça. On vous donne un peu de temps plus facilement).

R: *That's it, I think. Which is not... Among all the people I have contacted this has not systematically been proven but I think generally this is like it.* (Voilà. Je pense. Ce qui n'est pas... Dans l'ensemble des personnes que j'ai contactées, ça n'a pas été confirmé systématiquement mais je pense que, globalement, c'est quand même le cas).

RK: *Have you had any bad experiences?* (Vous avez eu des mauvaises surprises?)

R: *Yes* (Oui).

RK: *In the network?* (Dans le réseau?)

R: *Yes* (Oui).

RK: *In what sense.* (Dans quel sens?)

R: *In the sense where ... There are cases which I understand. There are people who can be very occupied, who don't have the time and who refuse any request for information. I understand this. In return, there is also the precise case of an Ancien who did not behave according to the strong ethical rules.* (Dans le sens où... Alors il y a des cas que je comprends. Des personnes qui peuvent être très occupées, qui n'ont pas le temps et donc qui déclinent les demandes de renseignements. Ça, je comprends. En revanche il y a eu également un cas précis d'un ancien qui n'a pas fonctionné sur une règle éthique forte).

RK: *According to strong ethical rules? What does this mean? What did he do?* (Sur une règle éthique forte? Ça veut dire quoi? Qu'a-t-il fait?)

R: *Lack of respect of the word given, of the accepted commitment. This type of thing. The case I was thinking about, which is very concrete, I have in fact discussed it with some other Anciens who had the same experience of misadventure. Before we were talking about the ethics necessary in a small community. And there this person, to be precise, he was discredited by his network. This is a pity for this person. There we have a loss of trust and credibility.* (Manque de respect à la parole donnée, aux engagements pris. Ce genre de choses. Le cas auquel je pense, qui est très précis, j'en ai parlé, du coup, à d'autres personnes du réseau qui ont eu le même type de mésaventure.... Tout à l'heure, on parlait de l'éthique qui est nécessaire au sein d'une petite communauté. Et là, cette personne-là, concrètement, s'est discréditée par rapport à son réseau. Donc c'est dommage pour cette personne. Là, on a une perte de confiance et de crédibilité).

R remembered a case where the person was discredited by the network as he did not adhere to the strict ethical and behavioural framework that applies to the community of the Anciens. The person did not stick to the word given and the commitments he had made which resulted into an exclusion from the network of the Anciens. Such group behaviour is an example of social control where control arising from norms of trust and reciprocity governs transactions in entrepreneurial dyads (Larson 1992).

Involving people whom the entrepreneur trusts

A further consequence resulting from the identification with like-minded people is trust. In entrepreneurial networks trust is an important component of the exchange relationships as it increases the firm's opportunities, improves its access to resources and add to its flexibility. As Goel and Karri (2006) as well as Kohtamäki, Kekäle & Viitala (2004) argue, entrepreneurs need to trust others and trust plays a major role in particular in the early stages of venture creation. The following section illustrates different types of trust as resulting from the cognitive processes of having network ties assessed as like-minded individuals belonging to the same 'cadre référentiel'. One of the key themes that permeates a number of interviews is the idea of ties either trusting the entrepreneur or having faith in the project. In addition, entrepreneurs also assess ties in terms of the trust the latter place in them. Furthermore GK's analysis of his network ties focuses on the question of 'confidence' (trust) and whether trust needs to be based on written or oral confirmation. The following extract from the interview with GK on 26.07.2006 illustrates the way the entrepreneur views his ties:

GK: *Ok, yes...there are people who say things and who you cannot trust. There are those who you think you can trust but finally it is better if it get written down. But for many operational reasons we accept this is not done. And also because there are things that you cannot write down. An accountant never writes anything down: Yes, you have the right to do this and you would not pay any VAT on it, even if this was a bit risky. This would be an aggressive position tax-wise. They would never write this kind of stuff. They would say it but never write it. And then there are those where you know that it is not even worth writing it down, as they have no objective reason to harm you, so they have no objective reason to lead you astray. And if they did, it would be in good faith. But these would not be the people with whom you would have problems afterwards. In my work I find it very difficult to judge all my business partners and to what extent I can trust what they say or not, and this means judging at what point I need to put pressure to have something in writing or not. Take for instance all my clients. I don't have a single client without a contract. There are clients who ask me to work for them but I systematically tell them that the prerequisite is the signature on the contract. Because this protects both parties* (Alors, oui. C'est... Il y a des gens qui disent des choses et auxquels on ne peut pas faire confiance. Il y a ceux auxquels on pense qu'on devrait faire confiance mais enfin c'est quand même mieux que ce soit écrit. Mais, pour plein de raisons opérationnelles, on accepte que ça ne le soit pas. Et puis parce qu'il y a des choses qu'ils n'écriront pas. Un expert-comptable n'écrira pas: "Oui, vous avez le droit de faire ça comme ça et vous ne paierez pas la TVA dessus, même si c'est un peu chaud. C'est une position agressive fiscalement." Ils n'écriront pas ce genre de chose. Ils le diront mais ils ne l'écriront jamais. Et puis il y a ceux pour lesquels on sait que ce n'est même pas la peine qu'ils écrivent parce qu'ils n'ont aucune raison objective de vouloir vous nuire, donc ils n'ont aucune raison objective de vouloir vous induire en erreur. Et, s'ils le font, en tout cas, c'est en toute bonne foi. Donc, de toute façon, ce ne sont pas des gens avec lesquels on ira au conflit ensuite. Donc le boulot que moi, j'ai par rapport à tous ces interlocuteurs, mais quels qu'ils soient, c'est de juger si je peux m'en tenir à ce qui est dit ou pas et c'est de juger à quel point je mets la pression pour avoir des documents écrits ou pas. Par exemple, tous mes clients. Je ne travaille avec aucun client sans contrat. Il y a des clients qui me demandent d'intervenir, je leur dis systématiquement que le préalable, c'est la signature d'un contrat. Parce que ça nous protège tous les deux).

RK: *Yes, of course. I have put here on one side the idea 'written =trust'* (Oui. Bien sûr. Donc l'idée que j'ai mise là... D'un côté j'ai mis: "écrit = confiance.")

GK: *Yes* (Oui).

RK: *And there we have put: 'oral=trust'*. (Et là, on a mis: "oral = confiance").

This extract shows that for GK trust boils down to a very simple equation, trusting somebody is about having something in writing, a rule he certainly applies to all his clients. As he admitted, however, there may be cases where trust does not need a written confirmation, but this varies from case to case. Trusting people requires understanding their psyche and their objectives. As he explained further:

This differs from partner to partner and it is quite variable, I would say from status to status. This means that there are some clients, for instance, for whom I just need a confirmatory email and there are clients from whom I want a written contract, signed as I feel that they could be malicious. (C'est variable d'un interlocuteur à l'autre et c'est même variable, je dirais, d'un statut à l'autre. C'est-à-dire qu'il y a des clients, par exemple, avec lesquels je me satisfais d'un e-mail et il y a des clients avec lesquels je ne me satisfais que d'un contrat écrit, signé parce que je sens qu'ils pourraient être malicieux.)

RK: *OK. Yes.* (Ok, Oui).

GK: *So defining this more precisely this is really a result of the discussions with these people, to understand their psyche, where they want to go...So it is a very fine assessment. From one client to another this can be very different. From one person to another this can be very variable* (Définir ça de façon précise, c'est vraiment le fruit de discussions avec ces gens-là, de comprendre

quel est leur psychisme, où est-ce qu'ils veulent en venir etc. Donc c'est très fin, en fait. D'un client à l'autre, ça peut être très variable. D'une personne à l'autre, ça peut être très variable).

This section has underlined the importance of the entrepreneur involving 'like-minded' people in his venture and has shed further light on the meaning of this concept. Arguably, the different approaches pursued by the entrepreneur in order to deal with a potentially hostile system need to be understood against the general risk averseness of French culture, as pointed by Hofstede (2001) and MacLean (2001). French business culture is characterised by an infinite search for organisational security which is linked to a deep-rooted need to avoid uncertainty and remove ambiguity (Gordon 1993, MacLean 2001). As a result, Collin (2007) recently emphasised, for the past few decades France has preferred to prioritise employment security to risk-taking. One way of avoiding risk and situations of uncertainty has been the creation and maintenance of business networks, kinship and friendship ties, supported by shared membership of organisations such as the Grandes Ecoles, which as Maclean (2001) suggested, are the source of power in French business, an aspect that was also supported by this research.

A concrete example of System D

I would like to conclude this article with a very concrete example of the hostile context in which entrepreneurs exist and which ventures are created, but I will also highlight how the entrepreneur coped, how he used the system D to his advantage. I was discussing with X the impact of regulation and rules of the French administrative system on entrepreneurship and enterprise creation. As X explained:

There are two ways of seeing this, on the one hand the constraint in terms of regulation, either the knowledge of regulation and of the system in order to avoid or use the system to your advantage. Looking at the ASSEDIC, this is a pure constraint, from the side of the accountant, this is very down-to-earth, I have chosen it like this. We discuss, he says, from an accountant point of view if you don't do this, you are at risk. He says, if the tax authorities attack you, we can explain why we have taken this decision. With the ASSEDIC we cannot take a position, they have a lot of power. They are tyrants, the accountant and the ASSEDIC work both on the aspect of rules and regulations. The accountant controls and conforms to the accounting rules but he is an ally, the ASSEDIC apply the rights to unemployment, very strictly (Deux façons de voir, soit le côté contrainte du règlement, soit la connaissance des règlements et du système pour pouvoir le contourner ou l'utiliser à son avantage.. Du côté ASSEDIC, c'est la contrainte pure. Du côté expert comptable, c'est un terrien, très terre à terre, je l'ai choisi pour ça. On discute, on dit : comptablement si vous ne faites pas ça, c'est un risque. Il me dit : si le fisc tombe dessus, on pourra expliquer pourquoi on a pris cette décision. Avec les ASSEDIC on ne peut pas prendre de position, ils ont les pleins pouvoirs. Ce sont des tyrans. L'expert comptable et les ASSEDIC travaillent tous deux sur l'aspect réglementaire. L'expert comptable

contrôle et est conforme aux règles comptables mais c'est un allié. Les ASSEDIC appliquent mes droits au chômage, strictement.

RK: *Are the ASSEDIC an enemy? (Les ASSEDIC sont un ennemi?)*

X: *They are neutral. They are also an ally, if I can create Y, this is also due to the fact that I can get the financial support of the ASSEDIC, if not it would be impossible. On the other hand they are very dangerous, they are tyrants. They can transform into enemies at any moment in time. You have to manage them with a light touch. They fall rather into the case of being an enemy, they are neutral as long as you don't bother them (C'est un neutre. C'est aussi bien un allié car si j'ai pu monter CK Performance, c'est parce que je touche des ASSEDIC, sinon je n'aurais jamais pu. Inversement, ils sont très dangereux, car ils sont des tyrans. Ils peuvent se transformer en ennemi à tout moment. Il faut les gérer avec doigté. Ils sont plutôt dans la case ennemi. Ils sont neutres tant qu'on ne les embête pas).*

X goes as far as to describe French administration as something out of Kafka's stories:

This is Kafka, the ASSEDIC on their own, this is not too bad, but the tandem ANPE-ASSEDIC this is diabolic. They don't say the same things. If you don't have it in writing, you are dead. In the end it is the ASSEDIC who win, now I now who is the Master. But you can trust the ASSEDIC. When the ANPE says something, this does not mean the ASSEDIC follow. When the ASSEDIC say something and write it, this is ok (C'est Kafka. Les ASSEDIC seules, ça va encore. Mais le tandem ANPE ASSEDIC, c'est diabolique. Ils ne disent pas la même chose. Si vous ne faites pas écrire les choses, vous êtes mort. A la fin c'est toujours les ASSEDIC qui gagnent. Maintenant je sais qui est le maître. Mais on peut faire confiance aux ASSEDIC. Quand l'ANPE dit un truc, ça ne veut pas dire que les ASSEDIC vont suivre. Quand les ASSEDIC disent quelque chose et l'écrivent, ça va.)

RK: *So this is the written aspect. Written means you can trust, have confidence (Il y a l'aspect écrit... L'écrit, on peut avoir confiance)*

X: *Yes, orally this has no value. Anything oral has no obligation. (Oui. L'oral, ça ne vaut rien. A l'oral, vous n'êtes engagé à rien).*

RK: *So how does this work with the accountant? (Comment ça marche avec l'expert comptable ?)*

X: *Everything is in writing. You can trust, with the ASSEDIC everything is in writing. If you ask a question to the representative of the ASSEDIC it is not necessarily the case that you will have the same interpretation of the rules, it needs to be written twice. With the accountant it is a game of invoices and everything is written (Tout est écrit. On peut faire confiance. Les ASSEDIC, tout est écrit. Si on pose la question à un représentant des ASSEDIC, il n'est pas certain qu'on n'ait pas la même interprétation de la règle. Il faut faire doublement écrire. Avec l'expert comptable, c'est un jeu de factures et d'écritures, et tout est écrit).*

As X concluded:

From the moment something is written, a mail by a representative who tells me that this is the interpretation of the rules, I believe in it (A partir du moment où j'ai un écrit, un mail, d'un représentant qui me dit que l'interprétation de la règle, je me le tiens pour dit).

This extract from an interview with X has illustrated the very difficult relationship between the entrepreneur and the French administrative system which at any moment in time can turn into his enemy. The ambiguity within the system itself and the difficulties between the different organisations to agree on the same interpretation of the rules and regulations are compared to one of these grotesque, surreal situations we find in one of Kafka's novels. X's

comments have also shown how difficult it is to establish trust in the system and that the only way to cope with it is by having everything in writing. The following extract from the same interview on 26.07.2006 shows how X coped with this very difficult situation. He discussed the help obtained from one of his friends, Z in this situation.

He is a manager; so he helped me to see clearer through these rules and regulations and helped me to better use them. For him, in fact, we are not a victim of the rules. It is only one of the criteria of our actions. So he does not represent the rules. He is there to help me, to clarify, to give an opinion, which is not simply a reading of the rules (Lui, c'est quelqu'un qui... C'est un manager. Donc, en fait, lui m'aide à voir plus clair au travers des réglementations et à mieux les utiliser, en fait. On n'est pas... Pour lui, en fait, on n'est pas victime d'une réglementation. C'est un des critères de choix de notre action. Donc lui, il ne représente pas de règles. Il est juste là pour m'aider, pour éclairer, en fait, fournir un avis qui n'est pas simplement la lecture de la règle.

He concluded:

Whereas my accountant and the ASSEDIC would say: the rules are these, he would say 'with a rule that says this, we can do this. How to work your work around it. (Autant mon expert-comptable et les Assedic vont me dire: "La règle, c'est ça." Autant lui, il va me dire: "Avec une règle qui dit ça, voilà ce qu'on pourrait en faire effectivement. Comment on peut la contourner).

This case has highlighted the importance to integrate individuals in the entrepreneurial network who do **not** perceive the individual as a victim of the French administrative system but help the entrepreneur to 'use' the latter to his advantage in creative, but legal ways. The objective is to work your way around a potentially hostile system, which can be used to the advantage of the entrepreneur, if interpreted in the right way. This is an illustration of the French way of 'se débrouiller', also called the system D.

The following figure summarises the results of this research.

Figure 1 take in here

Conclusions

The findings of this study have highlighted the importance of a number of deterring factors such as a business environment favouring an enterprise rather than employee culture, a general risk averseness in French society, the nature of the French finance sector, a general lack of entrepreneurial values in French society, administrative hassle and an elitist education system which impact potentially on entrepreneurship and enterprise creation within the French context. Despite this somehow discouraging context against which the study was set

the entrepreneurs who were interviewed for this research underlined the importance of their professional and personal network for getting their venture off the ground. In fact, through their contacts they found amazing ways of using the system to their advantage. More precisely they made deals with family, friends and colleagues in their immediate network to find financing for the struggling venture and avoid difficult negotiations with French banks. They also sought advice from like-minded network contacts who had lived through similar situations and could advise on how to cope with the system.

A further key element that emerged from the research was the need for reflexivity and reflection in the people who surround the entrepreneur. This has implications for the choice of ties the entrepreneur involves on a personal and professional level. Most entrepreneurs were involved to a larger or lesser extent with business support organisations and their staff, who, however, up-to-now, seem to have underestimated the need for reflection, as expressed by entrepreneurs such as P& G in this study. Nobody had asked the entrepreneur to take a step back and critically reflect upon what had been going on in the different phases of the entrepreneurial venture.

The study has clearly shown that despite a system hostile to entrepreneurial activities entrepreneurs can succeed with their entrepreneurial project. The research has also underlined the importance of the network for the success of the venture and for finding the appropriate contacts who could deliver the right advice needed at the right moment. The findings of this work could potentially provide new inspiration for policymakers and training providers who, could consider the possibility to integrate more like-minded people, reflective thinking and entrepreneurial network analysis tools in their in their start-up activities, ie. seminars and training sessions.

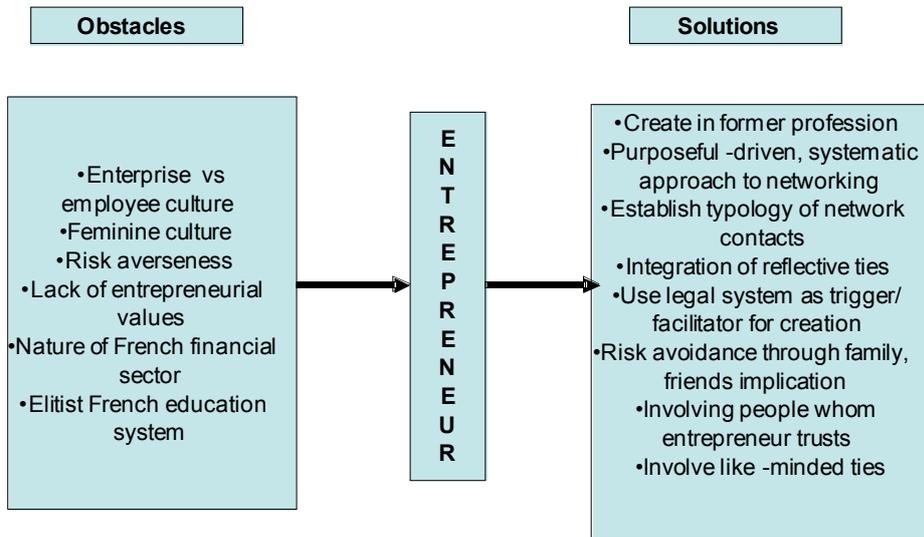
Furthermore the research has illustrated how a potentially Kafkarian situation in which the entrepreneur could be the victim of French administrative system can be turned into something positive due to the help the entrepreneur has received from his network contacts, who knew how to best apply the system D.

Figure 1:

References :

- Abdessalam, R., Bonnet, J. & N. Le Pape (2004) An Explanation of the Life span of French Firms *Small Business Economics*, Vol. 23, pp. 237-254.
- APCE (2008) *La Création d'Entreprises en France en 2006: Profil des Entreprises et de leur dirigeant*, <http://www.apce.com>
- Béranger, J., Chabral, R. & F. Dambrine (1998) *Rapport sur la Formation Entrepreneuriale des Ingénieurs* Ministère de l'Economie, des Finances et de l'Industrie
- Borgatti, S.P., Jones, C. & M.G. Everett (1998) Network Measures of Social Capital *Connections* Vol. 21, pp. 27-36.
- Carayannis, E.G., Evans, D. & M. Hanson (2003) A cross-cultural learning Strategy for Entrepreneurship Education: Outline of Key concepts and Lessons learned from a comparative Study of Entrepreneurship Students in France and the US *Technovation* Vol. 23, pp. 757-777.
- Cooper, A. & Dunkelberg, W. (1987) Entrepreneurial research: Old questions, new answers and methodological issues. *American Journal of Small Business*, 11(3): 11-23.
- David, P. A. (1994) - Why are institutions the 'carriers of history'? Path dependence and the evolution of conventions; organizations and institutions, *Structural Change and Economic Dynamics*, Vol. 5, no. 2, pp. 205-220
- Fayolle, A. (2007) L'Entrepreneur, Ferment de l'économie et de la Société *Les Echos*, 31.05.2007, p. 2.
- Fayolle, A. & P. Séricourt (2005) Peut-on former des entrepreneurs? *Expansion Management Review*, March, p. 34-48.
- Frugier, D. & C. Verzat (2005) Un Défi pour les institutions éducatives *l'Expansion Management Review*, March, pp. 42-48.
- Gordon, C. (1997) The business culture in France in C. Randlesome et al (eds) (2nd edition) *Business Cultures in Europe* Butterworth Heinemann.
- Gordon, C. (1993) Business Culture in France in William Brierley, Gordon, C. & C. Randlesome *Business Culture in Europe* Butterworth-Heinemann, pp.86-137
- Granovetter, M. (1992) Problems of explanation in economic sociology in N. Nohria & R. Eccles (eds) *Networks and Organisations* Harvard Business School Press: Boston, MA, pp. 25-56.
- Hofstede, G. (1994) *Culture's consequences International Differences in Work-related Values* Sage: Beverly Hills: CA.
- Hofstede, G. (1983) National Cultures in four Dimensions in *Int. Studies of Man. & Org.* Vol. XIII, No. 1-2, pp. 46-74.
- Jack, S. & Anderson, A.R. (2002) The Effects of Embeddedness upon the Entrepreneurial Process *Journal of business Venturing*, Vol; 17, pp. 1-22.
- Johannisson, B., Alexanderson, O., Nowicki, K. & K. Senneseth (1994) Beyond anarchy and organisation: entrepreneurs in contextual networks *Entrepreneurship & Regional Development*, Vol. 6, pp. 329-356.
- Johannisson, B. (1988) Business Formation – a network approach *Scandinavian Journal of Management*, Vol. 4, pp. 83-99.
- MacLean, M., Harvey, C. & J. Press (2006) *Business Elites and Corporate Governance in France and the UK* Macmillan: Basingstoke, UK.
- MacLean, M. (2002) *Economic Management and French Business* Pgrave Macmillan: Basingstoke, UK
- Masclot, T. (2003) La Crainte d'Entreprendre, une Exception Culturelle Française *Le Nouvel Economiste* 17.02., p.18.
- Prax, J-Y (2004) Districts industriels et savoirs en réseau *L'Expansion Management Review*, pp. 106113.
- Schutjens, V. & E. Stam (2003) The Evolution and Nature of Young Firm Networks: a longitudinal perspective *Small Business Economics* Vol. 2&, pp. 115-134.

The System D in France



Not all entrepreneurs learn equally from networking: The interaction between individual and interorganizational characteristics

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In a context of interorganizational learning networks, this article examines how positive partner expectations and self-efficacy are important for successful learning outcomes. Using survey data from 109 entrepreneurs who took part in entrepreneurial learning networks, we examine how trust in partners affects outcomes in terms of the capacity to act upon business opportunities. Further, we examine how this relationship is moderated by the entrepreneurs' own self-efficacy. Our results support a positive relationship between developing trust in other networking entrepreneurs and the capacity to act upon business opportunities. Self-efficacy was found to moderate this relationship. For entrepreneurs with low self-efficacy, results support an inverted U-shaped relationship, with the greatest outcomes reached with an intermediate level of trust. For entrepreneurs with high self-efficacy, a positive linear relationship is supported. We discuss implications for further research and for network managers.

Track: 12. Networking, Alliance and Outsourcing

Trust formation in the research collaboration between small businesses and universities: a comparative study of four countries

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In this study, we examine trust development mechanisms in university-industry research collaborations (UICs) in the US, Germany, Japan and Korea, focusing on small businesses. Based on social capital theory, we develop our hypotheses on trust formation mechanisms in UICs and test them with multiple regression analysis using original survey data in the biotechnology, microelectronics, and software industries in these four countries. Empirical results support our hypotheses with several cross-country differences. We conclude that initial trust formation is supported by tie strength, university's reputation, and contractual safeguards, while communication quality and champion behaviour play an important role in maintaining and developing trust.

Track: 12. Networking, Alliance and Outsourcing

Internationalisation of small to medium-sized management consultancies: A literature-based conceptual framework

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As many countries continue to move towards an increasingly technologically driven knowledge-based economy, the service sector gains importance with implications for the global economy. Yet academic literature has lagged in reflecting the increasing significance of services.

This paper seeks to critically appraise our understanding of international small to medium-sized enterprises (SMEs) in the service sector, specifically for management consultancies. Its key contribution is in drawing together recent work conducted in the fields of SME internationalisation and service sector from the perspective of small to medium-sized management consultancies into a conceptual framework.

Keywords: *SME internationalisation, service sector, management consultancies, conceptual framework*

Introduction

We live in an increasingly globalised world, in which the outlook is on an international and not just the local or national scale; where progressively more small to medium-sized enterprises (SMEs) are attracted to international markets (OECD, 1997). While SME internationalisation research to date has largely focussed on the manufacturing sector, the service sector is gaining attention as developed countries shift away from their manufacturing-base to an ever more technologically driven knowledge-based economy (Bryson et al., 1993).

This paper does not aim to give an exhaustive review on SME internationalisation¹ nor is its goal to look at why firms internationalise; rather it draws together literature from SME internationalisation and service sector internationalisation from the perspective of a highly intangible service sector, that of a small to medium-sized management consultancy firm. The scope of this literature review covers three spheres: firm size, service sector and international activity. Specifically, the focus is first on SME internationalisation, using an inclusive definition covering “the process of increasing involvement in international operations” (Welch and Luostarinen, 1988); this includes both inward and outward growth across national borders. The second section focuses on the service sector and its differences from the manufacturing sector; both SME and multinational enterprises (MNE) literature will be drawn on. The third section concentrates on internationalised service sector SMEs, particularly on professional services due to their intangibility, and whenever possible specificities for management consultancies are recognised, with some MNE literature drawn on when the SME literature is lacking. Subsequently, the Networking Theory and the resource-based view (RBV) are discussed in relation to its appropriateness for service sector SMEs in the fourth section. From these key findings, a conceptual framework is assembled from the various components in the fifth section. In closing, the next steps of the research agenda are explained, linking the conceptual framework with the empirical data collection.

¹ For a comprehensive review, see COVIELLO, N. E. & MCAULEY, A. (1999) Internationalisation and the Smaller Firm: A Review of Contemporary Empirical Research. *Management International Review*, 39, 223-256.

(i) SME internationalisation

Small firms internationalise for many reasons and in various ways (Ibeh, 2006). These can be proactive or reactive (Leonidou et al., 2007), for growth, to increase competitiveness or due to being pushed or pulled into markets by their clients (Quinn and Alexander, 2002). Internationalisation occurs at various speeds, sometimes rapidly while other firms wait until after being established in the domestic market (Bell et al., 2003). There is no one homogenous path for SME internationalisation and hence no one size fits all internationalisation theory for SMEs (Miesenbock, 1988, Wheeler et al., 2008).

The small size of SMEs does not seem to be a hindrance for their successful internationalisation; though they do encounter difficulties when internationalising, firm size alone has not been found to be a detriment. Calof (1993) examined the relationship between size and internationalisation of Canadian firms by looking at the propensity to export, international sales intensity and the countries served. With the exception of the very small firm classification (these firms are not likely to export); size does not seem to be a determining factor in internationalisation. However, he found a positive relationship between firm size and number of markets served, underlining the importance for SMEs not to be active in too many markets but rather to internationalise according to their resource capabilities (Calof, 1993).

This does not mean however that internationalisation is easy for SMEs; the factors that helped SMEs be successful in domestic markets (closeness to customers, flexibility to respond) no longer hold true for the international market and adjustment is necessary. The main obstacles to international activity often have to do with internal resources and limited capacities (Bijmolt and Zwart, 1994, Chetty and Campbell-Hunt, 2003, OECD, 2008, Wright, 1993). The centrality of resources and skills for successful internationalisation is reinforced by Ruzzier et al. (2006), who found the entrepreneur to be the main variable in SME internationalisation (Miesenbock, 1988) due to his strategic role and reach. This point is also acknowledged by Lloyd-Reason and Mughan (2002), particularly when it comes to the competencies of the SMEs' owner-manager; they posit that this person plays a determining role in a firm's strategic direction, after which a firm may address its skills and resource base. International orientation, including valuing foreign language use, was found to be a determinant of success in international trade (Knowles et al., 2006).

(ii) Service sector differs from manufacturing

Services, by their nature, overlap production and consumption, obliging interaction between employees and customers (Roberts, 1999, Van Looy et al., 1998). When internationalising, this brings a particular set of problems to the fore for service sector SMEs. Roberts (1999) highlighted the constraints on the method of internationalisation used by service firms due to: the need for personal contact between producer and client; the importance of quality and reputation; the long term buyer/seller relationship; human capital and information intensiveness; and the need for cultural sensitivity. Gadrey et al. (1995) noted from interviews with French firms (all sizes) in consultancy, insurance and electronic information sectors that service firms became quite skilled at managing the client relationship. Management skills, including strategic planning, customer management and risk assessment are important to knowledge transfer and global competitiveness.

When looking at entry modes for internationalisation, the service sector has some fundamental differences from the manufacturing sector. Service sector firms have comparably low-entry barriers to internationalisation, it is common for one office to suffice, compared to manufacturing firms that typically require a factory. Often, service firms require less financial investments than manufacturing firms as start-up costs are low (Erramilli and Rao, 1993, Roberts, 1999).

Edvardsson et al. (1993) in their study on Swedish service firms (all sizes, including consulting) highlighted the importance of balancing a firm's entrepreneurial vision with systemic planning and enacting global service concepts, while keeping in mind methods that adapt to local conditions. Again key competencies are needed by the management. Chadee and Mattson (1998) examined differences in New Zealand SMEs that export in the service and manufacturing sectors. They found that service exporters tended to be narrower in their export market selection than manufacturing firms; however these firms were also more committed to their exporting activities due to their more limited resources. Their findings suggest that commitment is the most important variable on

performance (Chadee and Mattsson, 1998). Patterson and Cicic (1995) from their classification of services, found that some services are more internationally marketable. Value-added customized services which require a high degree of supplier-client interaction for successful service delivery were the most successful. Though these services may have higher costs and risks, they also had higher profits than domestic markets and a very high satisfaction rate (Patterson and Cicic, 1995).

Service firms prefer to start with full-control modes when internationalising and only firms with low asset specificity are more likely to relinquish control (Erramilli and Rao, 1993). However, the findings of Erramilli and D'Souza (1993) on foreign market entry behaviour of small and large US service firms (size grouping determined by sector sales revenue) provided some contradictory evidence. It showed the behaviour of small firms differed from that of larger firms mainly in service industries characterised by higher capital intensity, whereas at lower levels small firms resembled big firms. Management consultancy firms are high-specificity firms as they are a pure service with high customer interaction, and therefore they tend to prefer an integrated entry mode. They typically internationalise via FDI, subsidiary, or by merger and acquisition (Vandermerwe and Chadwick, 1989). However, while low entry barriers may facilitate management consultancies into initiating internationalisation, it will not necessarily mean that they will be able to maintain a presence abroad; strategic issues of sustainability need to be addressed. Also as management consultancies have a high level of intangibility, risk assessment is important. Firms need to consider how they will work abroad while maintaining their reputation and safeguarding their intellectual property.

Brouthers and Brouthers (2003) examined the entry mode of European firms and uncovered similarities and differences between manufacturing and service firms, and found that service and manufacturing firms respond differently to transaction cost theory attributes (TCE). Specifically, they found service firms respond to behavioural uncertainty of TCE due to its people-oriented component and the people intensive nature of services. Manufacturing firms however tended to react to environmental uncertainties due to the fact that they tend to have higher investment costs. Service firms are different as they rely on people for both the simultaneous production and delivery of the service product. This dependency makes their foreign operations more difficult to manage and creates higher internal organisational costs than manufacturing firms (Brouthers and Brouthers, 2003). Service firms' entry mode choice appeared to be influenced by behavioural uncertainty and asset specificity, with firms perceiving high levels of behavioural uncertainty more likely to enter into a joint venture, whereas service firms with high asset specific investments preferred wholly owned modes of entry (Brouthers and Brouthers, 2003).

While Brouthers and Brouthers' (2003) study was on large firms and not SMEs, it may be extrapolated that service sector SMEs may also make entry mode decisions based on their firms' (human) competencies. This is confirmed by Hollenstein's (2005) study on the determining factors of internationalisation strategy of Swiss SMEs. He affirms Dunning's OLI (Ownership, Location, Internalization) paradigm (or eclectic theory of FDI), with 'O' drivers (ownership or firm-specific advantages) being the main drivers. While findings show that SMEs internationalise differently from large firms; however, these differences are more a matter of degree rather than substance (Hollenstein, 2005). Therefore, differences tend to divide manufacturing firms with service firms as opposed to a firm size dichotomy.

(iii) Service quality

Services are intangible, which makes standards hard to set and verify; in addition they cannot be stored and their consumption is inseparable from their production. These factors underscore the importance of motivation and quality of service delivery, and according to Caniels and Romijn (2005), the key to success is in understanding the customer's needs. Assuring quality of service is essential for service firms to remain competitive and compete internationally. Service quality is more than the service outcome and includes the process and delivery of the service. Parasuraman et al. (1985) research in four US service business sectors (retail banking, credit card, securities brokerage and product repair and maintenance, all sizes) yielded a model of service quality. This model identified gaps in perceptions of service quality between managers and customers, highlighting factors which greatly affect the customers' evaluation of the service as well as factors of perceived service quality. Often there may be misconceptions between what the two consider to be important components to the service for it to be considered high quality (Parasuraman et al., 1985).

Johnston (1995) classified determinants of service quality in UK banks to ascertain the customer's perspective on elements necessary for the service to be deemed satisfactory. He found responsiveness to be a key determinant of quality: necessary in providing satisfaction and when it is lacking it is a major source of dissatisfaction (Johnston, 1995).

Eriksson et al. (1999) studied Swedish firms (predominately SMEs) from eight sectors which supply business services abroad in order to examine foreign market entry mode and service quality. Research questions pertained to the influence of customer relationships, relationships with other firms and unique competence on supplier-perceived service quality and the influence of specific organisational arrangements abroad on service quality. To Eriksson et al. (1999), competence meant that the firm needs to be in possession of the required skills and knowledge to perform the service. Experience then facilitates the development and evolution of relationships, allowing for better decision-making (Eriksson et al., 1999). Service firms develop competence with experience abroad and increase their comparative advantage.

(iii) SME Service sector internationalisation

The service sector has been underrepresented in SME internationalisation literature to date. Empirical research on small to medium-sized service firm internationalisation has tended to be sector-specific (see Table 1), including architecture (Masurel, 2001), business services (Bryson et al., 1993, O'Farrell et al., 1996, O'Farrell et al., 1998), computer software (Bell, 1995, Coviello et al., 1998), engineering consultancy (Coviello et al., 1998, Coviello and Martin, 1999), retailing (Hutchinson et al., 2007, Hutchinson et al., 2005, Hutchinson et al., 2006) and tourism (Bjorkman and Kock, 1997). However, most of these studies do not pertain directly to management consultancy firms, leaving a gap in knowledge.

Table 1 Previous empirical research on SME service sector internationalisation

Author(s)	Date	Sample	Research method	Main focus	Findings
Bell	1995	98 software SMEs (<200 employees) from Finland (34), Ireland (38) and Norway (26)	Survey	Export behaviour of SMEs	Importance of client followership (pull), targeting of niche markets and industry-specific trends.
Bjorkman and Kock	1997	3 tourism SMEs in Finland	Case studies (interviews first by telephone then in person)	Inward international activities	Importance of culture and key actors/ social networks with international partners.
Bryson et al.	1993	120 small business service companies (60 management consultancies, 60 market research) in UK	Interview surveys, along with published and unpublished statistics, and data banks. Small firms defined as employing 10 or fewer professional staff or 25 or fewer total staff.	Scale, nature and geography of information-based business service growth during the 1980s.	Importance of small firms for national economic growth. Informal contacts and professional reputation are crucial to successful establishment and growth.
Coviello et al.	1998	9 software and engineering consultancy SMEs in NZ	Case studies (in-depth interviews, secondary sources and biographic history of internationalisation decisions)	International competitiveness measures of SMEs	Skilled and committed personnel and networking are important investments.
Coveillo and Martin	1999	4 engineering consultancy SMEs in NZ	Case studies (in-depth interviews and secondary sources)	Patterns and influences on: the decision to internationalise; subsequent internationalisation; market selection; and mode of entry.	Internationalisation process is influenced by several key organisational characteristics: (1) a product embodied in skilled personnel, (2) a relatively high degree of client involvement, (3) relatively low capital intensity, and (4) the project-based nature of the business.

Author(s)	Date	Sample	Research method	Main focus	Findings
Hutchinson et al.	2007	9 SME retail sector in UK	Case studies (in-depth interviews and company documentation)	Reasons for internationalisation and the facilitating factors to overcome obstacles	Confirms the importance of the role of the founder/ key manager in international decision making, suggesting a strong link between management factors and market choice. Also suggests a strong company brand identity is the most significant motive for expansion.
Hutchinson et al.	2006	9 SME retail sector in UK	Case studies (in-depth interviews and company documentation)	Role of management characteristics in the international development of SMEs	Objective and subjective characteristics impact the initial decision to expand but also the path and pace of international development. Formal networks are found to help small firms overcome problems due to size by providing knowledge and experience of foreign market expansion.
Masurel	2001	334 architecture SMEs in the Netherlands (NB only 14 % of firms were involved in exporting)	Survey	Export behaviour	Exporting SMEs gain relatively high profits and run low risks with their international business compared with non-exporting counterparts. Conclusions suggest exporting SMEs are homogeneous group.
O'Farrell et al.	1996	SME business services (engineering consultancy, management consultancy, market research, computer software and product design) in UK (Scotland and South East)	Longitudinal analysis (20 years) via questionnaire (856) and interviews (90)	International market selection and entry mode choice	Develops strategic context of decision making by business service SMEs that incorporates home region characteristics in developing foreign markets. Underscores importance of post-entry behaviour and market development in internationalisation.
O'Farrell et al.	1998	SME business services (engineering consultancy and management consultancy, market research, computer software and product design) in UK (Scotland and South East)	Survey (370) and interviews (90)	Process of foreign market entry	International markets selection is fundamentally unsystematic and ad-hoc. At first internationalisation is tentative, then more active and diverse, acknowledging sectoral differences.

This empirical research has been specifically highlighted as it addresses small to medium-sized service firm internationalisation. Though the findings vary in emphasis by sector, there is a clear common thread. For architecture firms, Masurel (2001) found exporting service SMEs gain relatively high profits and run low risks with their international business compared with non-exporting counterparts. For business service firms, Bryson et al. (1993) underlined the importance of informal contacts and professional reputation as crucial to both successful establishment and growth (Bryson et al, 1993); whereas O'Farrell et al. (1996) underscored the importance of post-entry behaviour and market development in internationalisation. This is in line with his later work (O'Farrell et al. 1998) which found business service firm's internationalisation process to be tentative at first and then becoming more active and diverse. For software SMEs, Bell (1995) highlights the importance of client followership (pull), the targeting of niche markets and industry-specific trends. Coviello et al. (1998) concur, having found skilled and committed personnel and networking as important investments for software and engineering consultancies. Coviello and Martin (1999) found the internationalisation process for engineering consultancy firms to be influenced by several organisational characteristics. Hutchinson et al (2007) work on retail SMEs confirmed the importance of the role of the founder/ key

manager in international decision making, suggesting a strong link between management factors and market choice. This builds on earlier work (Hutchinson et al. 2006) which found objective and subjective characteristics to impact the initial decision to expand but also the path and pace of international development, with formal networks providing help to small firms in overcoming problems due to size. Bjorkman and Kock (1997) also found networks significant, with culture and key actors/social networks being important for tourism firms. In sum, from the research already undertaken, the importance of a firm's ability to respond successfully when delivering their services abroad depends on the firm's skills and competencies, specifically those of the owner manager. In addition, there is a segmentation of needs that comes across differentiating the beginning of the internationalisation process and maintaining growth.

For this research, management consultancies have been specifically chosen for their sector-specific characteristics. Business services in general have low entry barriers when internationalising, and are amenable to the self-employed, because of the low start up costs and high value added, hence the large number of small firms in the sector (Bryson et al., 1993). Management consultancies, by their nature, necessitate high customer interaction, communication and cultural awareness; they embody a pure service². As there are no studies exclusively on small to medium-sized management consultancies, key works on service internationalisation, and specifically the business-sector, are highlighted in this next section. Particular focus is on their international market entry mode choice and performance measures in order to better situation the empirical work that is to be undertaken on the internationalisation of small to medium-sized consultancy firms.

(iii) Entry to international markets

Reihlen and Apel's (2007) study of professional service firms of all sizes including business consultancies, legal practices, engineering firms and advertising agencies, showed that newly internationalising firms acquire valuable knowledge from going abroad. Therefore, in order to gain and sustain their competitive advantage, firms need to manage their intellectual capital, which includes both their personnel and the firm's networks (Reihlen and Apel, 2007). In sum, service sector firms need internal skills (management and strategic competencies) and networking capacities.

Bell (1995) studied the export behaviour of small computer software SMEs in Finland, Ireland and Norway and found that most firms offered specialized products to niche markets. The study looked at the initial export decision of the firms and their internationalisation process. Findings highlighted the importance of client followership (pull), sectoral targeting and computer industry trends. Overall the behaviour was reactive and opportunistic, at least early on. He questioned the Uppsala (stages) theory (specifically psychological and geographic proximity), underscoring the importance of networks especially in the early stages of internationalisation.

The analysis conducted by O'Farrell et al. (1996) on the internationalisation of small to medium-sized business services in the UK and the Netherlands found that most firms' internationalisation was reactive and due to specific circumstances. However, management consultancy and computer software firms were found to be the most proactive by far amongst the business services, proving to be particularly adept in gaining repeat business and winning new clients (O'Farrell et al., 1996). Building on their work, O'Farrell et al. (1998), acknowledge sectoral differences for services with management consultancies being more orientated towards Europe and North America, due to their higher incomes and lower cultural and linguistic differences. In this respect, firms adhere to the Uppsala (stages) theory of psychic distance, moving from known to less known countries.

Hutchinson et al. (2005) suggested that for small to medium-sized retail companies, strategy and market appeal of retail SMEs is driven by the owner managers' vision, experience, knowledge and networks of international markets. Building on that, Hutchinson et al. (2006) then underlined the role of management characteristics to the international development of SMEs' customer service skills as important. Formal networks help small firms overcome problems due to size. Findings highlighted objective (knowledge and experience) and subjective (attitudes, perception and personality)

² For a classification of modes and strategies of service internationalisation, see VANDERMERWE, S. & CHADWICK, M. (1989) The Internationalisation of Services. *Service Industries Journal*, 9, 79-93.

characteristics as factors which impact the decision to internationalise as well as entry mode and speed of internationalisation. Furthering their work, Hutchinson et al. (2007) examined internal and external facilitating factors to SME internationalisation in the retailer industry to find that internal factors play a decisive role in the development of the company's brand identity which in turn has a determining effect on the decision to internationalise. In short, these findings suggest that internal competencies, specifically managerial competencies, are integral to successful internationalisation in service sector SMEs.

(iv) Theoretical perspective: Networking Theory, RBV and the service sector

The Network Theory stresses the importance of relationships, including the role of social and business networks (Chetty and Campbell-Hunt, 2003, Coviello and Munro, 1995, Johanson and Mattsson, 1988) and is an outgrowth of Uppsala internationalisation process model (Johanson and Vahlne, 1977). When a firm has gaps in its internal skills set, one way this can be overcome is with the help of their networks. A firm with a supportive, skilled network can be used to the firm's advantage, giving an additional source of knowledge and ability when there may be a gap in what is needed and what the firm is able to provide. Lindsay et al. (2003) noted the critical role of relationships and the individual as being central to the process of knowledge transfer for international service firms (of all sizes).

Coviello and Munro (1995) focused their research on the use of network relationships (both formal and informal) to pursue foreign market opportunities and conduct international marketing activities based on in-depth case studies of New Zealand (NZ) software SMEs. They recommended that managers should value network relationships as key to competitive capability. From their study on NZ SMEs in the engineering consulting sector, Coviello and Martin (1999) found that managers of service-intensive firms need to have a thorough appreciation of the impact of network relationships on internationalisation. They confirm the assertion by Clark et al. (1996) that service internationalisation may be too broad to be defined by any one theoretical framework, calling for research to be extended to other business service sectors, including management consultancies (Coviello and Martin, 1999).

The resource-based view also seems applicable to small to medium-sized management consultancies. Peng (2001) looks at the evolution of resource-based view (RBV) in the international business literature, specifically its effect on multinational management, strategic alliances, market entries, and international entrepreneurship. RBV focuses on firm-level determinants of a company's performance, joining together international business theory with strategy (Peng, 2001). RBV attributes market entry success as being linked to firm resources and is also related to international entrepreneurship, as shown by how some SMEs internationalise rapidly due to their tacit knowledge (Peng, 2001).

Westhead et al. (2001) took a resource-based view to identify factors encouraging UK SMEs to export by examining four categories of human and financial capital: general human capital resources, the principal founder's management know-how, the principal founder's specific industry know-how and a principal founder's ability to obtain financial resources to buffer against random shocks. They found that businesses with older principal founders, more resources, denser information and contact networks, and experienced management know-how are significantly more likely to export (Westhead et al., 2001).

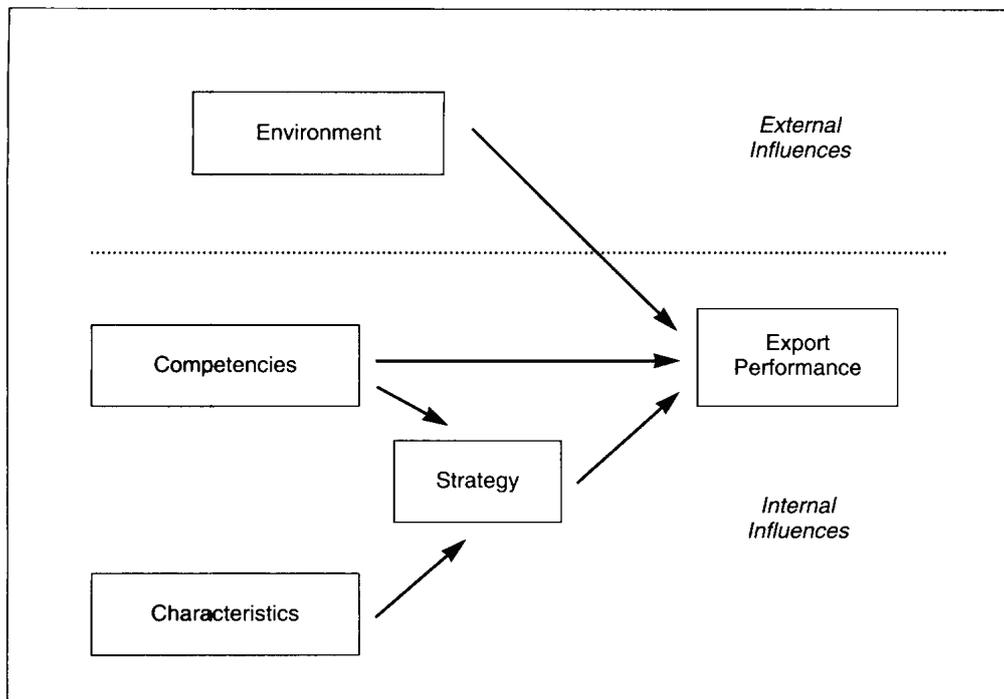
The empirical research discussed in this paper is to be undertaken from a resource-based view which states how superior performance can be attained relative to the firms in the same market and that superior performance results from exploiting unique resource for the firm (Barney, 1991). Following this logic for management consultancies, a firm's ability to respond successfully when delivering their services abroad depends on their personnel. The firm's staff and internal environment are intangibles that fit within the resource-based view's definition of exhibiting value, rarity, inimitability and non-substitutability. Additional theoretical underpinning draws on the Network Theory, which stresses the importance of relationships, including the role of social and business networks (Chetty and Campbell-Hunt, 2003, Coviello and Munro, 1995, Johanson and Mattsson, 1988) and is an outgrowth of Uppsala internationalisation process model (Johanson and Vahlne, 1977). The research also considers the importance of the role of Strategic Human Resource Management (SHRM). As Knight (2001) explains, "because foreign markets usually involve various uncontrollable challenges not present in the

home market, strategic competence may be especially salient to international success in resource-constrained SMEs” (p. 161).

(v) Conceptual Framework

Internationalisation literature shows strong empirical support for the positive link between management support, commitment and attitude on internationalisation (Aaby and Slater, 1989, Bijmolt and Zwart, 1994, Ibeh, 2006, Ibeh, 2003, Wheeler et al., 2008, Zou and Stan, 1998). Aaby and Slater (1989) found a positive relationship between exporting firms’ management commitment and propensity to export. Their model includes internal and external variables but as a firm has greater control internally, the focus is on internal influences such as firm characteristics and competencies, performance and strategy. Aaby and Slater’s conceptual framework was developed from reviewing literature on their determinants of export performance from 1978 to 1988 which yielded fifty-five articles, consisting of all firm sizes and sectors in multiple countries. They built on Bilkey’s (1978) review to define the relationship between export performance and its determinants.

**Figure 1
THE AABY AND SLATER MODEL**



Aaby and Slater (1988) taken from Bijmolt and Zwart (1994) p.72

Bijmolt and Zwart (1994), then build on Aaby and Slater’s model (1989), to measure key variables of exporting success: firm characteristics, planning, organisational structure and attitude, based on exporting Dutch SMEs. Their research confirms Aaby and Slater’s findings that firm characteristics play an influential role on export success; however this time the model is applied to small to medium-sized firms. Wheeler et al. (2008) then advance the exporting model further in an integrative model on UK firms of all sizes that includes internal environment factors (firm characteristics and resource base, and firm competencies and strategies) external environment factors (external opportunities and threats) and measures of success (financial, non-financial and composite scales). Their evaluation of recent empirical research on key influences of export performance in the UK shows the importance of managerial, resource/competency-related and relationship-based factors on firm-level export performance. Unfortunately, a limitation of all three of these models is the focus on exporting only and not internationalisation in its various forms. Another limitation is the emphasis that has been heavily on both large firms and the manufacturing sector. Finally there is no clear distinction of time in the framework to distinguish antecedents to the international process, adaptations made and outcomes of the internationalisation process.

It is from this empirical grounding, that the basis of the conceptual framework for this paper is drawn (see Figure 2). Aaby and Slater's components of internal competencies, firm characteristics and external environment are kept; however export strategy has been modified to internationalisation strategy, as it is more inclusive. In addition, due to the nature of services with its production/consumption aspect that obliges closer interaction along with the aforementioned difficulties, service provision has been included in the conceptual framework. Not only is it an important aspect of a service firm's successful performance in domestic activities but this aspect is paramount if a service firm is to internationalise successfully. In the past services have been under represented in research, in part perhaps due to their lower numbers in internationalisation compared to manufacturing, but also perhaps due to the difficulty of the intangibility inherent with services. With the advancement of globalisation and information technology (IT), service firms and in particular service SMEs are finding lower entry barriers, making it easier to internationalise. However, difficulty in assessing and measuring service provision should not exempt study of service SMEs, particularly those that are pure services. For these reasons, a bin specifically for service provision has been added to the conceptual framework. In order to capture the dynamism of the firms, there must be a time element present. Building on Antoncic and Hisrich's (2000) inclusion of antecedents (environmental conditions and organisational characteristics) and international consequences (organisational performance) in their conceptual framework of international entrepreneurship, the conceptual framework for this paper represents these elements in the bottom section. It begins with antecedents of internationalisation, includes modifications made during the process and the consequences of internationalisation resulting in firm performance.

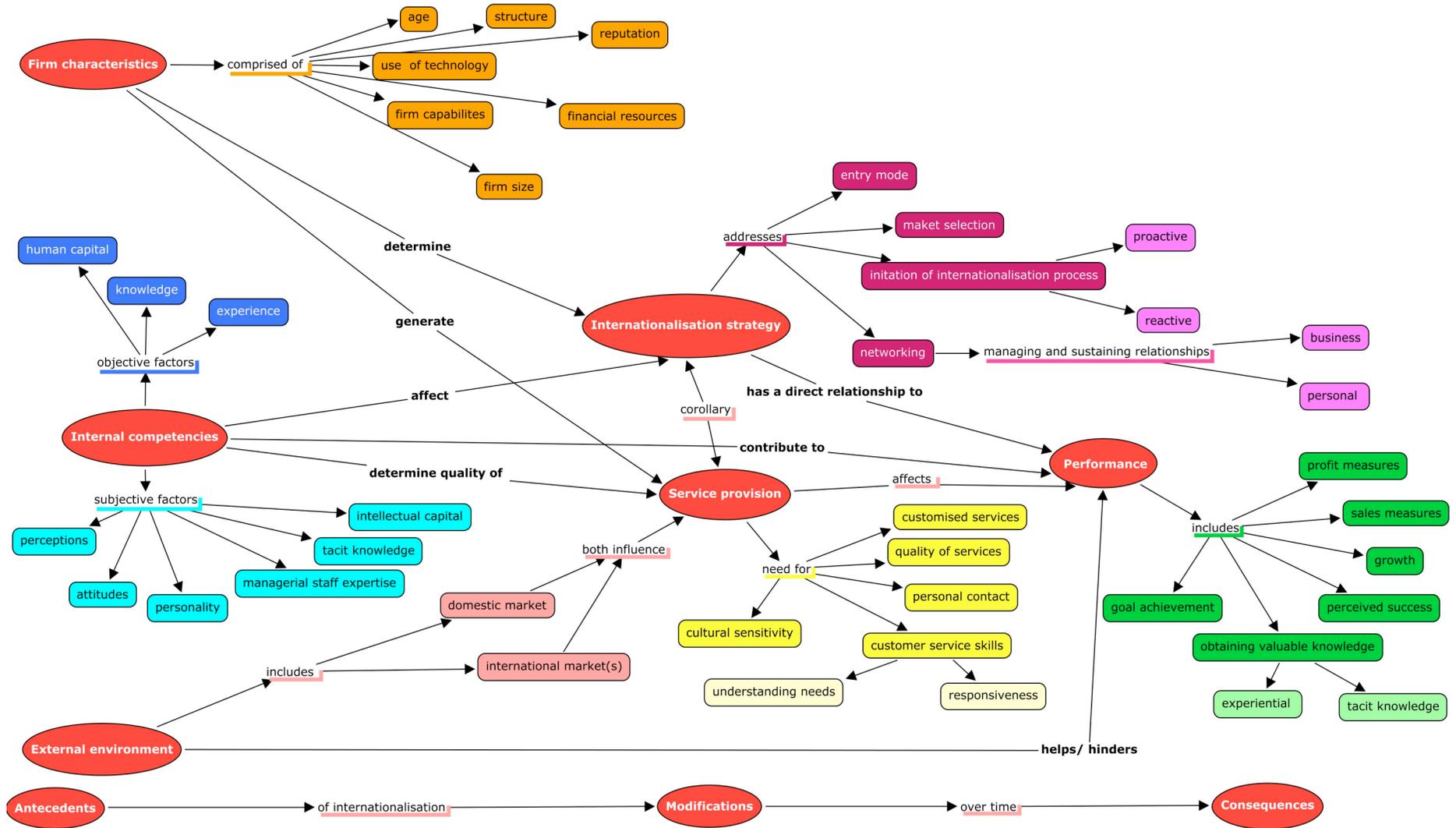
Figure 2 shows these main categories, or bins using Miles and Huberman's (1994) term, along with sub categories. These sub categories have been informed from the literature. Figure 2 also highlights how these elements interact with each other, showing the dynamic nature of this process. Starting from the top left of the diagram is the bin for **firm characteristics**. This category covers the firm's age; structure; reputation (Roberts, 1999, Styles and Ambler, 1994); use of technology; financial resources; firm capabilities; and firm size. The perspective is that of a firm as a whole. Firm characteristics play a determining role in internationalisation strategy which then has a direct relationship to performance. These characteristics also generate the type of service provision that the firm can provide.

Following the conceptual framework down from firm characteristics is the bin for **internal competencies** (Aaby and Slater, 1989, Bijmolt and Zwart, 1994, Chetty and Campbell-Hunt, 2003, OECD, 2008, Peng, 2001, Wright, 1993). This is from the skills level of an individual perspective within the firm. These competencies are comprised of both objective factors such as human capital (Coviello et al., 1998, Edvardsson et al., 1993, Roberts, 1999, Westhead et al., 2001); knowledge, defined as formalized and theoretical knowledge with measures including number of years of education and formal training (Alvesson, 1993) for example in foreign languages (Knowles et al., 2006) and time spent abroad; and experience (Quinn and Alexander, 2002); as well as subjective factors such as perceptions; attitudes; personality; managerial expertise (Karagozoglu and Lindell, 1998, Reihlen and Apel, 2007); tacit knowledge; and intellectual capital (Hutchinson et al., 2006, Hutchinson et al., 2007). Internal competencies affect the internationalisation strategy and determine the quality of service provision. They also contribute to the firm's performance level.

The next bin encountered is for the **external environment** which includes the role of market conditions both domestically and in foreign markets. This in turn influences service provision. The external environment can also help or hinder firm performance.

As already mentioned, both firm characteristics and internal competencies contribute to the decision of determining an **internationalisation strategy**. These strategies are applicable to firms that have already decided to internationalise, addressing how they internationalise and what their strategy will be (Edvardsson et al., 1993, Lloyd-Reason and Mughan, 2002, Miesenbock, 1988, Ruzzier et al., 2006). It addresses the subsequent decisions of entry modes (Hutchinson et al., 2007, Knight, 1999); market selection; initiation of internationalisation process: proactive or reactive (Bell, 1995), including the role of serendipity (Meyer and Skak, 2002); and networking (managing and sustaining both business and personal relationships) (Chetty, 1996, Coviello et al., 1998, Coviello and Martin, 1999, Coviello and Munro, 1995). Internationalisation strategy is also a corollary to service provision that a firm can provide. This means that while the service provision is a determinant of what type of

Figure 2 Conceptual Framework for service sector SMEs based on literature review



internationalisation strategy a firm can undertake, the decision of entry mode will also continue to structure the type of service provision that is possible although there may be some margins for modification within these parameters. Internationalisation strategy has a direct relationship with firm performance.

The **service provision** bin focuses on customised services (Edvardsson et al., 1993, Eriksson et al., 1999, Hutchinson et al., 2006, Patterson and Cicic, 1995); quality of services (Caniëls and Romijn, 2005, Eriksson et al., 1999, Parasuraman et al., 1985, Roberts, 1999) with its inherent intangibility (Knight, 1999); the need for personal contact (Patterson and Cicic, 1995, Roberts, 1999); customer service skills (Gadrey et al., 1995) which includes both responsiveness (Johnston, 1995) and understanding needs (Caniëls and Romijn, 2005); and cultural sensitivity (Bjorkman and Kock, 1997, Knight, 1999, Roberts, 1999). Service provision affects performance. Inherent in all this is the trust between the client and the firm. Edvardsson (1989) found trust to be a key determinant when purchasing management consulting services from his research on consultancy services in Sweden, highlighting the need for effective interaction and communication between consultant and client.

The **performance** bin includes financial (Cavusgil and Zou, 1994) and non-financial measures, drawing its specific determinants heavily from the work undertaken by Wheeler et al. (2008) This category includes profit measures; sales measures; growth; perceived success; obtaining valuable knowledge, including experiential, tacit knowledge; and goal achievement (Wheeler et al., 2008). A firm's performance in international market(s) is the consequence of the internationalisation process and is an indicator on whether modification or even market withdrawal should be considered.

(v) Moving from the literature to the research agenda

These new perspectives on SME and service-sector internationalisation give insights to how small to medium-sized internationalised management consultancy firms may provide services internationally. From this review, it is clear that internal firm competencies are significant antecedents. Networking gives a key comparative advantage. International experience increases a firm's competency and knowledge. In order to maintain these advantages, firms must assure service quality that is in touch with clients' demands. Empirical research is now needed to support these claims for small to medium-sized consultancy firms.

In order to collect empirical data, the research will take an analytical look at the ways in which small to medium-sized management consultancy firms internationalise (including key success factors, strategies and barriers); investigate their internal environment (including management style, maintenance of relationships and personnel skills); and examine how services are delivered (including the degree of interaction between employees and customers).

The variables in the conceptual framework, drawn from the literature, will serve as prompts for semi-structured interviews to be undertaken with small to medium-sized management consultancy firms. Qualitative research is being undertaken to understand the why and how of service sector internationalisation for small to medium-sized management consultancy firms. The research is exploratory, phenomenological and framed within an interpretive research paradigm. Primary data is to be gathered by the case study method according to Yin's (2008) approach. The unit of analysis is the firm and multiple-cases (10-12) will be undertaken rather than a single case to allow patterns to emerge and avoid chance associations. This research is in response to Fillis' (2001) call for more qualitative case studies, with semi-structured in-depth interviews acknowledged by Hollenstein (2005) as being advantageous for in-depth analysis. A case study research design, when properly conducted, allows for data richness, depth and quality, which can compensate for the associated shortcomings, notably limited representativeness and generalisability (Ghauri, 2004, Ibeh, 2005, Miles and Huberman, 1994).

The decision to use in-depth interviews as the main data collection tool is to allow for detailed discussion on the issues. Questions will inquire on the founders' background, history of the business, marketing activities, networking activities, management style of the firm, personnel and their skills, service delivery, how and when international activity began, strategies used, key success factors, adaptations made after internationalisation, barriers encountered and how they were overcome. However, dialogue should not

be seen as limited to the points mentioned in this paper but rather they are a starting point or springboard into a rich conversation on the firm's internationalisation process. The firm will be given the opportunity to discuss other aspects or elements which the researcher may not have considered. Therefore these variables are not viewed as rigid limiters but are aspects of firm internationalisation performance indicators that have emerged from the literature as seeming to be of relevance for small to medium-sized service firms. As this is an under explored area particularly for a highly intangible service such as management consultancies, the work is exploratory in nature and therefore the interviewer will see what issues the firms themselves identify as most significant to see how small to medium-sized management consultancies relate to internationalised SMEs or other service sector firms and if there is a differentiation in firms that internationalise as a result of proactive strategy versus those that were more reactive.

The qualifiers for the case study are based on firm size, sector and internationalisation. In particular, this means in order to be interviewed, a firm must be an SME (as defined by European standards), consider itself a management consultancy firm and be currently involved in international activities. Management consultancies are defined in the broad sense to include: IT; strategy and organisation; marketing; operations management and human resources.

Table 2 Requirements for data collection

Qualifier	Definition	Action to be taken	
i. Size: SMEs	A small to medium enterprise (SME) is defined using the European Union's definition [< 250 employees, $\leq \text{€ } 50$ million turnover or a balance sheet total of $\leq \text{€ } 43$ million] for ease of comparability.	If yes then continue to point ii	If no ineligible for interview.
ii. Sector: management consultancy	Management consultancies are defined in the broad sense to include: IT; strategy and organisation; marketing; operations management and human resources. The firm must consider itself a management consultancy.	If yes then continue to point iii	If no ineligible for interview.
iii. Internationalisation	For the purpose of this research, internationalisation is defined as "the process of increasing involvement in international operations" (Welch and Luostarinen, 1988). This covers inward and outward growth across national borders. All firms interviewed should have sufficient international experience to take a retrospective look at the internationalisation process. Firms should also indicate if the internationalisation process was proactive or reactive.	If adheres to all these parameters interview is scheduled.	If no ineligible for interview.

The firms to be interviewed will be located in one country, the United Kingdom, to control for country effects. The UK has been specifically chosen as the home country as there are significant numbers of management consultancies firms. This consulting market is the largest outside the US and according to the UK Management Consultancies Association; industry revenues for 2006 estimated at £8bn and delivering some of the most cutting edge organisational change projects in the world (M.C.A., 2009). Also as this research is looking at SMEs, by using the UK there is a comparable SME standard with the rest of Europe. Within the UK, the East of England has been chosen, not only because it is geographically accessible to the author but also due to the high number of management consultancies active there, in particular in the area around Cambridge known for a high concentration of information technology and bio technology firms in the UK. As this is case study research with the aim of theoretical and not statistical replication, the sample pool is large enough to support the numbers needed. Specifically the management

consultancy sector has been chosen due to its highly skilled nature and the importance of trust and customer relations due to the nature of the service. These elements are strong in all management consultancies irrespective of their sub sector. Management consultancies are a pure service and have a high degree of intangibility. In addition, management consultancy is seen as one of the few service sectors as truly operating in a global marketplace (Rebbeck and Knight, 2001). The focus will be limited to one sector in order to control for industry effects on internationalisation (Calof, 1994, Erramilli and D'Souza, 1993). A distinction will be made as to why management consultancies internationalised whether it was a proactive or reactive decision to flush out the homogeneity or heterogeneity of the group. The fact that there is such sparse research on SME service sector internationalisation, in particular management consultancies and their heightened particularities of intangibility when internationalising further research is merited before making artificial distinctions.

Conclusion: Contribution of research

The starting point for this literature review underscores the relevancy of SME internationalisation and that the service sector is different from the manufacturing sector. Therefore it is unsurprising that international service sector SMEs have their own particularities. They face obstacles to internationalisation, with certain characteristics facilitating success, including firm-level skills and competencies, quality assurance and strong networks. This study draws upon previous work in the fields of SME internationalisation, specifically in the service sector, as well as networking theory and management theory. The resource-based view is applied to internationalised consultancy management SMEs, with specific focus on their internal environment, networking skills and service provision. From this review, it is clear that internal firm competencies are key. Networking gives a significant comparative advantage. International experience increases a firm's RBV qualities (value, rarity, inimitability and non-substitutability) as it gains competency and knowledge. In order to maintain this advantage, firms must assure service quality that is in touch with customers' demands. Empirical research is now needed to support these claims relevancy for small to medium-sized consultancy firms.

These new perspectives on SME and service-sector internationalisation begin to fill the gap on small to medium-sized internationalised management consultancy firms. Original data is to be collected from UK-based small to medium-sized consultancy firms in order to ascertain their internationalising experience, identify elements that proved to be the most important as well as what problems they encountered, and how they adapted. Emerging patterns will be explored. Success factors will be examined and will include both financial and non-financial measures.

The research aims are twofold to:

- Advance knowledge on how SME internationalisation in the service sector, specifically for firms with high intangibility like management consultancy firms, successfully provide services internationally; and to
- Gain fresh insights that will feed into ongoing research to be undertaken on small and medium-sized management consultancy firms in the UK to foster small to medium-sized service sector firms' success and international competitiveness.

References

- AABY, N. E. & SLATER, S. F. (1989) Management Influences on Export Performance: A Review of the Empirical Literature 1978-88. *International Marketing Review*, 6, 7-26.
- ALVESSON, M. (1993) Organizations as Rhetoric: Knowledge-Intensive Firms and the Struggle With Ambiguity. *Journal of Management Studies*, 30, 997-1015.
- ANTONCIC, B. & HISRICH, R. D. (2000) An Integrative Conceptual Model. *Journal of Euromarketing*, 9, 17-35.
- BARNEY, J. (1991) Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17, 99-120.
- BELL, J. (1995) The internationalization of small computer software firms. *European Journal of Marketing*, 29, 60-75.
- BELL, J., MCNAUGHTON, R., YOUNG, S. & CRICK, D. (2003) Towards an Integrative Model of Small Firm Internationalisation. *Journal of International Entrepreneurship*, 1, 339-62.
- BIJMOLT, T. H. A. & ZWART, P. S. (1994) The Impact of Internal Factors on the Export Success of Dutch Small and Medium-sized Firms. *Journal of Small Business Management*, 32, 69-83.
- BJORKMAN, I. & KOCK, S. (1997) Inward international activities in service firms: illustrated by three cases from the tourism industry. *International Journal of Service Industry Management*, 8, 362-376.
- BROUTHERS, K. D. & BROUTHERS, L. E. (2003) Why Service and Manufacturing Entry Mode Choices Differ: The Influence of Transaction Cost Factors, Risk and Trust. *Journal of Management Studies*, 40, 1179-1204.
- BRYSON, J., KEEBLE, D. & WOOD, P. (1993) The Creation, Location and Growth of Small Business Service Firms in the United Kingdom. *Service Industries Journal*, 13, 118-131.
- CALOF, J. L. (1993) The Impact of Size on Internationalization. *Journal of Small Business Management*, 31, 60-69.
- CANIËLS, M. C. J. & ROMIJN, H. A. (2005) What works, and why, in business services provision for SME: insights from evolutionary theory. *Managing Service Quality*, 15, 591 - 608.
- CAVUSGIL, S. T. & ZOU, S. (1994) Marketing strategy-performance relationship: An investigation of the empirical link in export. *Journal of Marketing*, 58, 1-21.
- CHADEE, D. D. & MATTSSON, J. (1998) Do service and merchandise exporters behave and perform differently? *European Journal of Marketing*, 32, 830-842.
- CHETTY, S. (1996) The case study method for research in small- and medium-sized firms. *International Small Business Journal*, 15, 73-85.
- CHETTY, S. & CAMPBELL-HUNT, C. (2003) Paths to Internationalisation among small- to medium-sized firms: A global versus regional approach *European Journal of Marketing*, 37, 796-820.
- CLARK, T., RAJARATNAM, D. & SMITH, T. (1996) Toward a Theory of International Services: Marketing Intangibles in a World of Nations. *Journal of International Marketing*, 4, 9-28.

- COVIELLO, N. E., GHAURI, P. N. & MARTIN, K. A. M. (1998) International Competitiveness: Empirical Findings from SME Service Firms. *Journal of International Marketing*, 6, 8-27.
- COVIELLO, N. E. & MARTIN, K. A. M. (1999) Internationalization of Service SMEs: An Integrated Perspective from the Engineering Consulting Sector. *Journal of International Marketing*, 7, 42-66.
- COVIELLO, N. E. & MCAULEY, A. (1999) Internationalisation and the Smaller Firm: A Review of Contemporary Empirical Research. *Management International Review*, 39, 223-256.
- COVIELLO, N. E. & MUNRO, H. J. (1995) Growing the entrepreneurial firm. *European Journal of Marketing*, 29, 49-61.
- EDVARDSSON, B. (1989) Management Consulting: Towards a Successful Relationship. *International Journal of Service Industry Management*, 1, 4-19.
- EDVARDSSON, B., EDVINSSON, L. & NYSTROM, H. (1993) Internationalisation in Service Companies. *Service Industries Journal*, 13, 80-97.
- ERIKSSON, K., MAJKGARD, A. & SHARMA, D. D. (1999) Service quality by relationships in the international market. *Journal of Services Marketing*, 13, 361-375.
- ERRAMILI, M. K. & D'SOUZA, D. E. (1993) Venturing into Foreign Markets: The Case of the Small Service Firm. *Entrepreneurship: Theory & Practice*, 17, 29-41.
- ERRAMILI, M. K. & RAO, C. P. (1993) Service firms' international entry-mode choice: A modified transaction-cost analysis approach. *Journal of Marketing*, 57, 19-38.
- FILLIS, I. (2001) Small firm internationalisation: an investigative survey and future research directions. *Management Decision*, 39, 767 - 783.
- GADREY, J., FAIZ, G. & WEINSTEIN, O. (1995) New modes of innovation. *International Journal of Service Industry Management*, 6, 4-16.
- GHAURI, P. (2004) Designing and conducting case studies in international business research. IN MARSCHAN-PIEKKARI, R. & WELCH, C. (Eds.) *Handbook of Qualitative Research Methods for International Business Research*. Cheltenham, Edward Elgar.
- HOLLENSTEIN, H. (2005) Determinants of international activities: Are SMEs different? *Small Business Economics*, 24, 431-450.
- HUTCHINSON, K., ALEXANDER, N., QUINN, B. & DOHERTY, A. M. (2007) Internationalization Motives and Facilitating Factors: Qualitative Evidence from Smaller Specialist Retailers. *Journal of International Marketing*, 15, 96-122.
- HUTCHINSON, K., QUINN, B. & ALEXANDER, N. (2005) The Internationalisation of Small to Medium-Sized Retail Companies: Towards A Conceptual Framework. *Journal of Marketing Management*, 21, 149-179.
- HUTCHINSON, K., QUINN, B. & ALEXANDER, N. (2006) The role of management characteristics in the internationalisation of SMEs: Evidence from the UK retail sector. *Journal of Small Business and Enterprise Development*, 13, 513-534.
- IBEH, K. I. N. (2003) Toward a Contingency Framework of Export Entrepreneurship: Conceptualisations and Empirical Evidence. *Small Business Economics*, 20, 49-68.

- IBEH, K. I. N. (2005) Toward a greater level of international entrepreneurship among agribusiness firms: resource levers and strategic options. *Management International Review*, vol. 45.
- IBEH, K. I. N. (2006) Internationalization and the Small Firm IN CARTER, S. & EVANS, D. (Eds.) *Enterprise and Small Business: Principles, Practice and Policy* 2nd ed., Financial Times and Prentice Hall.
- JOHANSON, J. & VAHLNE, J. E. (1977) Internationalization Process of Firm-Model of Knowledge Development and Increasing Foreign Market Commitments *Journal of International Business Studies*, 8, 23-32.
- JOHANSON, J. U. & MATTSSON, L. G. (1988) Internationalization in Industrial Systems: A Network Approach. IN HOOD, N. & VAHLNE, J. E. (Eds.) *Strategies in Global Competition*. New York, NY, Croom Helm.
- JOHNSTON, R. (1995) The determinants of service quality: satisfiers and dissatisfiers. *International Journal of Service Industry Management*, 6, 53-71.
- KARAGOZOGLU, N. & LINDELL, M. (1998) Internationalization of small and medium-sized technology-based firms: An exploratory study. *Journal of Small Business Management*, 36, 44-59.
- KNIGHT, G. (1999) International services marketing: review of research, 1980-1998. *Journal of Services Marketing*, 13, 347-360.
- KNIGHT, G. A. (2001) Entrepreneurship and strategy in the international SME. *Journal of International Management*, 7, 155-171.
- KNOWLES, D., MUGHAN, T. & LLOYD-REASON, L. (2006) Foreign language use among decision-makers of successfully internationalised SMEs: Questioning the language-training paradigm. *Journal of Small Business and Enterprise Development*, 13, 620-641.
- LEONIDOU, L. C., KATSIKEAS, C. S., PALINHAWADANA, D. & SPYROPOULOU, S. (2007) An analytical review of the factors stimulating smaller firms to export. *International Marketing Review*, 24, 735-770.
- LINDSAY, V., CHADEE, D. D., MATTSSON, J., JOHNSTON, R. & MILLETT, B. (2003) Relationships, the role of individuals and knowledge flows in the internationalisation of service firms. *International Journal of Service Industry Management*, 14, 7-35.
- LLOYD-REASON, L. & MUGHAN, T. (2002) Strategies for internationalisation within SMEs: the key role of the owner-manager. *Journal of Small Business and Enterprise Development* 9, 120-129.
- M.C.A. (2009) Management Consultancies Association www.mca.org.uk. last accessed on 14 April 2009.
- MASUREL, E. (2001) Export Behaviour of Service Sector SMEs. *International Small Business Journal*, 19, 80-84.
- MEYER, K. & SKAK, A. (2002) Networks, Serendipity and SME Entry into Eastern Europe. *European Management Journal*, 20, 179-188.
- MIESENBOCK, K. J. (1988) Small businesses and exporting: a literature review *International Small Business Journal*, 6 42-61.
- MILES, M. B. & HUBERMAN, A. M. (1994) *Qualitative data analysis*, Thousand Oaks, CA, Sage, 2nd edition.

- O'FARRELL, P. N., WOOD, P. A. & ZHENG, J. (1996) Internationalization of business services: an interregional analysis. *Regional Studies*, 30, 101-18.
- O'FARRELL, P. N., WOOD, P. A. & ZHENG, J. (1998) Internationalisation by business service SMEs: an inter-industry analysis. *International Small Business Journal*, 16, 13-21.
- OECD (1997) *Globalisation and SMEs, Vols 1 and 2*, Paris, Organisation for Economic Cooperation and Development (OECD) Publishing.
- OECD (2008) *Removing Barriers to SME Access to International Markets* Paris, Organisation for Economic Cooperation and Development (OECD) Publishing.
- PARASURAMAN, A., ZEITHAML, V. A. & BERRY, L. L. (1985) A Conceptual Model of Service Quality and Its Implications for Future Research. *Journal of Marketing*, 49, 41-50.
- PATTERSON, P. G. & CICIC, M. (1995) A Typology of Service Firms in International Markets: An Empirical Investigation. *Journal of International Marketing*, 3, 57-83.
- PENG, M. W. (2001) The resource-based view and international business. *Journal of Management*, 27, 803-829.
- QUINN, B. & ALEXANDER, N. (2002) International retail franchising: a conceptual framework. *International Journal of Retail & Distribution Management*, 30, 264-276.
- REBBECK, M. & KNIGHT, A. (2001) Global Consulting. IN SADLER, P. (Ed.) *Management consultancy: a Handbook for best practice*. 2nd ed. London, Kogan Page.
- REIHLEN, M. & APEL, B. A. (2007) Internationalization of professional service firms as learning – a constructivist approach. *International Journal of Service Industry Management*, 18, 140-151.
- ROBERTS, J. (1999) The Intel-nationalisation of Business Service Firms: A Stages Approach. *Service Industries Journal*, 19, 68-88.
- RUZZIER, M., HISRICH, R. D. & ANTONCIC, B. (2006) SME internationalization research: past, present, and future. *Journal of Small Business and Enterprise Development*, 13, 476 - 497.
- STYLES, C. & AMBLER, T. (1994) Successful Export Practice: The UK Experience. *International Marketing Review*, 11, 23-47.
- VAN LOOY, B., VAN DIERDONCK, R. & GEMMEL, P. (1998) *Services Management: an Integrated Approach*, London, Financial Times Management / Pitman.
- VANDERMERWE, S. & CHADWICK, M. (1989) The Internationalisation of Services. *Service Industries Journal*, 9, 79-93.
- WESTHEAD, P., WRIGHT, M. & UCBASARAN, D. (2001) The internationalization of new and small firms: A resource-based view. *Journal of Business Venturing*, 16, 333-358.
- WHEELER, C., IBEH, K. & DIMITRATOS, P. (2008) U.K. export performance research: review and implications. *International Small Business Journal*, 26, 207-239.

- WRIGHT, P. C. (1993) The Personal and the Personnel Adjustments and Costs to Small Businesses Entering the International Market Place. *Journal of Small Business Management*, 31, 83-93.
- YIN, R. (2008) *Case study research: Design and methods* Thousand Oaks, CA, Sage Publishing, 4th edition.
- ZOU, S. & STAN, S. (1998) The determinants of export performance: A review of the empirical literature between 1987 and 1997. *International Marketing Review*, 15, 333-356.

Entrepreneurial Marketing: A Comparative Case Study of 42Below Vodka and Penderyn Whisky*

By: Sussie C. Morrish and Jonathan H. Deacon

Entrepreneurial marketing has gained popularity in the entrepreneurship and marketing disciplines recently. The success of ventures pursuing non-traditional marketing approaches can be attributed to entrepreneurial marketing practices. Despite the multitude of marketing concepts and models, there are notable successes that deviate from these and are labeled “entrepreneurial.” The purpose of this paper is to explore entrepreneurial marketing approaches used by companies and their impact on the success of marketing activities. We use the seven core dimensions of entrepreneurial marketing developed by Morris, Schindehutte, and La Forge (2002) and apply these to two spirit company cases: 42Below Vodka and Penderyn Whisky.

Introduction

While many marketing successes are analysed in hindsight using traditional marketing concepts and strategies, there are some that challenge standard marketing textbook recommendations. Marketing strategy is often viewed as a process of targeting, segmenting and positioning (STP), an approach much often advocated by academics and consultants alongside marketing and business plans to ensure success in the marketplace. The reality however, is that a number of businesses do not practice these and pursue alternative approaches often categorised as entrepreneurial marketing.

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Entrepreneurial marketing (henceforth EM) has gained popularity in both the entrepreneurship and marketing disciplines in recent times. The success of ventures that have pursued what can be considered non-traditional marketing approaches can be attributed to EM practices. Despite the multitude of marketing concepts and models, there are prominent venture successes that do not conform to these and have thus been put in the “entrepreneurial” box. One only has to look at the “Virgin” model to put this in context. Branson has shown that not “sticking to the knitting” can work with the ways the Virgin portfolio has been diversified. Consequently, an entrepreneurial orientation is considered a desirable business philosophy and has become prominent in such industries as airlines and information technology. Miles and Arnold (1991) found that entrepreneurial orientation is positively correlated to marketing orientation. They propose that entrepreneurial orientation is a strategic response by firms to turbulence in the environment.

Other schools of thought and business models have developed to explain differences in orientation such as branding (Keller 2001), the service-dominant logic (Vargo and Lusch 2004) and effectuation logic (Sarasvathy 2001). This is an indication that scholars are now looking to cognate fields to explain a given phenomenon beyond long-held traditional models. Supporting this trend is a growing number of researchers working at the entrepreneurship and marketing interface. There is now an emerging body of work dedicated to this interface, hence the development of EM as a complement or alternative to traditional marketing approaches.

Although it started as a special interest group, EM is now gaining recognition in mainstream entrepreneurship and marketing literature. For example new marketing textbooks now incorporate an entrepreneurial marketing focus (Grewal and Levy 2008, Pride and Ferrell 2009). The popular trade press and business publications however have recognised it much earlier although it may have been called by another name.

Background in Literature

What is Entrepreneurial Marketing?

EM is an amalgamation of two discrete management areas. Existing as distinct disciplines, marketing and entrepreneurship have evolved to capture the many facets of marketing that are often not explained by existing traditional marketing concepts and theories. An early definition of EM was offered by Morris, et al. (2002:5) as the

“proactive identification and exploitation of opportunities for acquiring and retaining profitable customers through innovative approaches to risk management, resource leveraging and value creation.”

Incorporating the latest AMA (American Marketing Association) definition of marketing, Hills and Hultman (2008) extend this by proposing that EM is

“a spirit, an orientation as well as a process of passionately pursuing opportunities and launching and growing ventures that create perceived customer value through relationships by employing innovativeness, creativity, selling, market immersion, networking and flexibility.”

Based on the above definitions, it can be argued that critical aspects of marketing and entrepreneurship are synthesized into a comprehensive conceptualisation where marketing becomes a process that firms can use to act entrepreneurially (Morris, et al. 2002). Examples of these conceptualisations are reflected in alternative perspectives such as guerrilla marketing, radical marketing, expeditionary marketing, disruptive marketing and others. They identified seven core dimensions (see dimensions section) of EM. Morris, et al (2002) further posit that EM represents a different approach to envisioning business and its relationship with the marketplace such that firms that adopt EM seek to lead customers as opposed to reacting to or following them. Consequently their attention is devoted to the creation of new markets rather than serving existing ones. As such, EM is fundamentally an opportunity-driven and opportunity-seeking way of thinking and acting (Morris, et al 2002).

Empirical evidence suggests that a significant relationship exists between an enterprise's marketing and entrepreneurial orientations (Miles and Arnold 1991), both widely being responsible for corporate success. There is also now a growing number of academic work on EM on the role of marketing in SMEs (Carson and Gilmore 2000; Bjerke and Hultman 2002; Grunhagen and Mishra 2008) and large firms (Miles and Darroch 2005) and there are multiple exemplars of new ventures engaged in EM featured in trade press and business publications. Given this, we see evidence that marketing plays a crucial role in developing, producing, and selling products or services and impacting on the success of staff recruitment and capital raising activities.

EM is often driven by the entrepreneur who is able to orchestrate multiple roles within the firm. Successful entrepreneurs do have unconventional methods of undertaking marketing especially given limited resources. They rely on interactive marketing methods most likely communicated through word-of-mouth, often electronically, rather than a more traditional marketing mix. These entrepreneurs also monitor the marketplace through informal networks rather than formalised market research, and generally adopt more entrepreneurial approaches to marketing activities.

Marketing and entrepreneurship can be regarded as parallel paradigms (Carson 1999). Being an emergent field, research findings on the interrelation between marketing and entrepreneurship are somewhat fragmented so far, and there is no integrated analysis or comprehensive theory yet. The development of research and tentative suggestions of “parallel paradigms” can be seen in literature focusing upon the interface between marketing, entrepreneurship and the small firm (Carson and Gilmore 1999; Copley 2002a; Hills and LaForge 1992, Carson and Coviello 1995; Hills 1987; Carson et al. 2002; Carson et al. 2003).

SME Marketing

The foundations of entrepreneurial marketing are to some extent grounded within the SME (Small to Medium Enterprise) sector. Indeed, there is a strong argument within the literature that EM is really about SME marketing. Within the generic marketing management literature also is a stratum of thought that suggests EM is somewhat like “textbook” marketing, but undertaken either with some flair or just simply doing something completely different across all aspects of the normative marketing mix (Earls 2002; Chaston 2000). This is perchance more visible in the execution of

creative promotion strategies. Some argue that this approach is perhaps, on the one hand, what marketers should be doing anyway (for example see Brown 2001) and on the other, it may overlook the complex subtleties that underpin an entrepreneurial approach to market development. Being entrepreneurial however is not a necessary prerequisite as Bjerke and Hultman (2002) argue that not all small firms are entrepreneurial, but will need entrepreneurship in order to grow and such growth can be leveraged from the small firm's advantage in marketing. Decision making in smaller firms is often ad-hoc and they are able to act on opportunities and implement strategies faster than larger firms could. Indeed, Bennett and Cooper (1981, 1984) even suggest that the stagnation of innovation in large firms is due to traditional marketing practices where the focus is on meeting explicitly expressed consumer needs.

The argument here revolves around the notion that size affects the manner by which firms approach marketing decisions. Bjerke and Hultman (2002) propose that in this era of dramatic social and technological change, one approach for firms to establish and sustain long-term customer relationship is through EM facilitated by a four-pillar framework comprising of entrepreneurship, resources, processes, and actors (entrepreneur, coordinating firm, and network).

Marketing is a challenging process for any organisation. In a survey of entrepreneurs around the world Hisrich (1989) found that marketing and finance are the two the leading problem areas for entrepreneurs. Indeed, a model that works for one firm but may not for another. The distinction is exacerbated when one considers the difference between large and small firms. Scholars have been engaged in an ongoing debate within literature as to the very nature of marketing (see for example: Brown 1995; Gronroos 1997; Palmer and Ponsonby 2002) and the fit between theory and practice. Indeed there has been a growing and focused literature at what has been labelled Marketing at the Entrepreneurship Interface (Carson 1999; Hills 1999). This focus has been brought about for a number of reasons: that the SME conducts a different type of marketing to that of the large firm (Carson and Gilmore 2000) and that perhaps this type of marketing activity is in advance of current theoretical, pedagogical and conceptual underpinning (Brownlie and Saren 1997). For example, large firms are likely to follow set processes (e.g. outsource marketing efforts, etc.). Smaller firms more often than not (due to resource constraints) conduct their own marketing campaigns in house. It is this condition that shifts the dominant thought and becomes the basis of an alternative paradigm (Carson 1999).

There are thoughts too that suggest that such marketing activity represents marketing in its purest form "it's marketing but not as we know it" (Deacon and Corp 2004). Indeed Carson, Gilmore and Grant (2001:6) contend that: "SME's do not conform to the conventional marketing characteristics of the marketing textbook theories." However they are not alone in that view as it is increasingly recognised that marketing as perceived and undertaken by entrepreneurs is different to the concepts presented in conventional textbooks (Stokes and Lomax 2002; Hulbert, Day and Shaw 1998; Copley 2002b; Forsyth and Greenhough 2003).

Carson and Gilmore (2000) propose that stage of the SME lifecycle and the prevailing industry norms are two 'fundamental pre-requisites' that will dictate the approach to marketing taken by the SME. However these must be placed against the backdrop of

the personal characteristics of the owner/manager/entrepreneur as ‘the rationale of the small firm is the rationale of the owner’ (McClelland and Winters 1969; Kets de Vries 1977; Brockhaus 1982; Deacon 2002; Bjerke and Hultman 2002) and the two can not be divorced in order to ease conceptual formation.

The first of these: life cycle stage – would suggest that as the small firm matures so does the approach to marketing. The second: conformity with industry norms – focuses on the sectoral context in which the small firm exists. According to Fuller (1994) small firms usually conform to the norms that are firmly established within the sector, as a small firm will not have the resources or even the motivation to challenge sector rules. History has shown that sector convention can be challenged by those outside and increasingly it is the small firm with exceptional market sensing that can make such a challenge (Enright 2001). For example, Kay (1995) points out that customers pay little interest in industries but pay a lot of interest to having their needs met.

Carson and Cromie (1989) contend that an entrepreneurial orientated firm that seeks opportunity is likely to exhibit a market development orientation and that both are related to the overall organisational culture, the personality of the owner/manager/entrepreneur and the environment that the small firm finds itself in. EM therefore must be viewed as contextual given the “individuality” of marketing has been highlighted. Deacon (2002) concurs that the “personality” of the firm and any subsequent marketing activity is connected to the personality of the owner/manager. Further, it has to be highlighted that social connectedness is important to small firms and that the firm is at one with the social environment within which it sits. What appears to be suggested is that through social interaction a small firm owner will gain marketing knowledge (in a type of organic totality) at such a subconscious level that it becomes operationalised as a form of fuzzy experiential excellence (Deacon 2002).

Overall, it is strongly argued that marketing is performed differently in SMEs than in large firms based on distinct dimensions. Carson and Gilmore (2000) propose a conceptual model that illustrates SME marketing dimensions, these being: marketing in context (situation specific) dependent on adapting standard textbook marketing frameworks, network marketing, competency marketing, and innovative marketing. It is beyond the scope of this paper to explore each of these dimensions in depth hence the reader is invited to see Carson and Gilmore (2000) for detailed discussion of these dimensions.

Entrepreneurial and Marketing Orientation

There are several studies that have investigated the relationship between entrepreneurial and marketing orientation highlighting similarities and differences between the two. Morris and Paul (1987) highlighted the inherent similarity between marketing and entrepreneurship and hypothesised that more entrepreneurial firms would also be more marketing oriented. Market-orientated firms and/or managers also need to be entrepreneurial if they are to seize opportunities. Simmonds (1986) posited that marketers should engage in an ongoing process not only of identifying change opportunities but also of inducing continual change in their organisations and, by extension, in the marketplace.

One can however be distinguished from the other. While there is evidence and support on the positive correlation between entrepreneurial orientation and marketing orientation (Morris and Paul 1987), that they do not represent the same underlying philosophy (Miles and Arnold 1991). Essentially marketing orientation can exist independently and does not always need aspects of entrepreneurial orientation such as tendency to be innovative, accept risks and act in a proactive manner. Miles and Arnold (1991) propose that an entrepreneurial orientation can be developed depending on the dynamics of the environment.

It has been argued elsewhere that market-oriented firms become too customer-focused at the expense of innovation. To counter this, Hamel and Prahalad (1994:83) suggest that an entrepreneurial approach to marketing has emerged as a mechanism to mediate the tyranny of the served market. By having an entrepreneurial approach, the firm is able to engage in market-driving behaviour (Schindehutte, Morris and Kocak (2008). Schindehutte et al. (2008) argue that this behavior is distinct from a firm's market orientation, and is the essence of entrepreneurial action in the Schumpeterian "creative destruction" sense. This scenario can be viewed as a way of manifesting entrepreneurial orientation.

Additionally, Schindehutte, et al. (2008) further contend that the firm's entrepreneurial orientation interacts with other strategic orientations, in the process determining how they are manifested and whether they are manifested in some cases. For example, strategic behaviours are the drivers of growth and/or expansion of products and technologies fuelled by environmental conditions (Moreno and Casillas 2008). Rapid firm growth can occur when the condition is highly dynamic, not very hostile and resources are available. In a sample of 434 small to medium sized companies, Moreno and Casillas (2008) found that entrepreneurial orientation is positively correlated to growth, although this relationship is rather complex being dependent on market and other conditions. On the whole however, there is overwhelming evidence that entrepreneurial orientation plays a critical role in determining transitions among various strategic orientations over time (Schindehutte et al. 2008).

Dimensions of Entrepreneurial Marketing

The literature reviewed thus far indicates that EM is widely applied in the SME context. The application of entrepreneurship in a marketing context is well-argued but the reverse should also be considered. Marketing covers a huge domain, whether as a discipline, concept, activity, process or any other manifestation of description (Carson et al. 2001). It therefore makes sense that marketing should be observed, not from a single perspective but from several: academic, practitioner and researcher, reflecting perhaps, the different applications of the discipline to suit specific practice requirements (Carson et al. 2001). Given this contention, EM should not be limited to SMEs. For example, Miles and Darroch (2006) found that EM processes can be used strategically to foster entrepreneurship within marketing processes, building and renewing competitive advantage in large firms.

All these bring into focus the dimensions of EM. Morris, et al. (2002) developed seven core dimensions of entrepreneurial marketing. These are: *opportunity-driven, proactiveness, innovation-focused, customer intensity, risk management, resource leveraging and value creation*. These dimensions distinguish entrepreneurial from administrative marketing (Hills, Hultman and Miles 2008). In their study of 59 firms

from Sweden and the US, Hills et al. (2008) found that firms with EM orientation exhibit a different strategic orientation, commitment to opportunities, opportunity recognition mechanisms, control of resources, and management structure. For example, non-EM oriented firms would tend to use formal market research while EM firms tend to rely on experience, immersion and intuition. Further, EM firms are less constrained by budgets and have adaptive strategies whereas non-EM firms are more oriented to using budgets and top-down corporate planning driven by financial metrics (Hills, et al., 2008).

In presenting EM as an interface, the authors of this paper agree with Hills and LaForge (1992) that entrepreneurship researchers can benefit from more sophisticated marketing concepts and methods, and that much value can be derived from looking to the marketing discipline in informing entrepreneurship research.

Methodology

In order to investigate EM, we take a qualitative approach and employ two cases. Qualitative approaches are the dominant state of the art research in the EM area (Carson and Coviello 1996). Because of its emergent nature, it is understandable that a majority of the work range from exploratory to explanatory pieces and conceptual to contemplative (Carson and Coviello 1996).

The use of cases is a recommended method for researching EM and the use of two cases has its precedent in Mankelov and Merrilees (2001). Schindehutte, et al. (2008) employed two case studies to illustrate how trajectories can be identified in the dominant strategic orientations within companies as they evolve.

In this study we also use two cases: 42Below, vodka producers from New Zealand and Penderyn Distillery, whisky distillers from Wales. The cases were chosen based on the following criteria. Firstly, both companies originate from small economies. Secondly, both make products (spirits) from locations that are not traditionally regarded as producers of their flagship products and thirdly, the two companies are of similar age. Penderyn was established in 1998 and 42Below was founded in 1999. Vodka has never been associated with New Zealand. By the same token, whisky has always been associated with Scotland and Ireland but never been with Wales. Both companies defied traditional stereotypes in marketing their flagship products and found international success.

In this comparative case study approach, we use the Morris, et al. (2002) model of EM and apply a qualitative lens on the approaches of both companies. Partly based on Covin and Slevin (1989) this EM model was also used by Miles and Darroch (2006) in looking at EM processes in large companies. We explore the strategies of both companies based on the seven core elements of EM. We start with case histories for both cases.

Case 1: 42Below

42Below was founded by a Wellington-based entrepreneur and ex-Saatchi and Saatchi Marketing Executive 39 year-old Geoff Ross in 1999. Hailed by many

observers a unique marketing success, 42Below is New Zealand's first premium vodka. Like many start ups, 42Below was financed from personal sources including selling the family home. In the early days, Ross distilled at home using a home brewing kit while his pregnant wife delivered cases of vodka of up to six cases a week. In 2003, the company was floated to raise capital for growth and expansion into international markets. Despite some criticism that the company was too young, too small, and too soon to float, the IPO raised \$15 million. Ross retained 26% of the company. Three years later, they were producing 7000 cases a week and selling to 25 countries. By the end of 2006, the company was sold to Bacardi Ltd. for \$138 million (Morrish, 2009).

42Below's claim to fame is grounded in the source and purity of its ingredients. Described as "New Zealand in a bottle" 42Below has unashamedly associated itself with New Zealand and all the attributes of the country. Its main ingredient is sourced from the crystal clear spring flowing through the 42 degree latitude, below the equator that holds the international benchmark for water and air purity situated just north of Wellington. Its alcohol content is set at 42%, much higher than average that signals higher quality and greater purity. 42Below's limpidness is the result of a sophisticated 6-week long distillation process with multiple filtrations that creates a more viscous character on the palate. Three years after it was floated, 42Below expanded their product portfolio that included the award-winning spirit "South Gin", the company's spring water "420" and two types of rum "Seven Tiki" and "Tahiti Dark Rum."

Despite the fact that vodka is not widely consumed in New Zealand, vodka-based cocktails are in the US and parts of Europe. Responding to global trends towards flavoured spirits, 42Below introduced unique Kiwi flavours such as Kiwifruit, Passionfruit, Feijoa and Manuka Honey. Their creativity was not limited to the product. This extended to the way they marketed 42Below, quite unlike the mass advertising that is often used by their competitors. Their use of viral marketing was hugely successful. More interesting is the way they have broken many rules including being non-politically correct and taking on such issues as being gay or national identities (German, French, English) in a cheeky and irreverent way. This was an outcome of Ross' extensive advertising background complemented by his network of other shareholders with a collective expertise in advertising, fashion and media. 42Below does not conform to usual company staff titles. For example, Ross is called the Chief Vodka Bloke and they have Vodka Professors that teach bartenders in their Vodka University while Brand Agents wear "42Below Job" t-shirts.

42Below targets what they call the "elite of the cocktail set," a segment with high disposable income. This segment wants to be unique, entertained and provoked. As such they are likely to respond to individuality, cheek and irreverence. Individuals belonging to this segment respond to brands they and their social circles discover, not those endorsed by the mass media. When it comes to cocktails, this group relies on word of mouth recommendations from friends and bartenders. Realising that the cocktail set naturally converged in

bars, Ross saw bar staff as the way to reach their target consumers. As this segment rejects mass advertising, 42Below relies on web technology and interpersonal communication for their promotion strategies.

Ross believed truly successful brands evoke fresh stories and exotic experiences of people and places. Needless to say, its country of origin being clean, green, pure and creative became a source of competitive advantage for 42Below. It was for this reason that 42Below launched the Annual International Cocktail World Cup where the most influential people behind the best bars of the world are flown to Queenstown for a truly unique New Zealand experience. In this event, 42 top bartenders from around the world mix vodka cocktails while doing extraordinary adventures such as jumping off a helicopter, bungee jumping and on bars on top of snow-peaked mountains. This event attracts extensive worldwide television coverage.

42Below aims to be the most desired and talked about vodka in the world. To do this, they set their own standard of being the best by differentiating not in terms of their competition but by doing things their way. They sell stories designed to evoke a different reaction on every customer they touch and many customers post their stories on online blogs such as Saatchi and Saatchi's Lovemarks page.

Best means sourcing the best possible ingredients and processing. It also means finding the perfect packaging that symbolises 42Below attributes. Failing to find a local supplier for a bottle design he wanted for the vodka, Ross sourced the bottle from France where he originally spotted it.

42Below's marketing strategy approach deviates from traditional marketing practices. They exploited international opportunities long before they were established domestically. This approach usually requires the use of networks to penetrate various niche markets and advocates the use of personal experience as ways of minimising risk and uncertainty (Chetty and Campbell-Hunt 2004). Ross used his networks of creative people to design and develop 42Below products and marketing tactics specifically for their niche market. He also called on his personal experience both from his advertising career and by visiting the bars where 42Below's target customers are frequently found.

This approach precludes entry to new markets for the sake of territorial expansion. Each market is carefully chosen and entered only where there is scope for the brand to become meaningful. Their entry into new territories has consistently relied on positioning as a premium brand using premium price points and highly selective distribution channels. 42Below's pricing strategy is consistent with that positioning. In the US it sells at about \$30 per bottle.

42Below firstly expanded to the Australian market followed closely by the UK and the US. The perceived similarities of these markets meant that 42Below was able to use the same form of viral marketing across the three markets. They entered the Italian, German and French markets after winning two premium awards in Brussels and Paris. All the bars they supply in these

countries powerfully endorse their products. With 42Below consistently winning taste tests around the world It is not surprising that they have won multiple awards including the 2004 Gold Medal at the Brussels Monde World Selection for 42 Below Pure Vodka. It also won gold for 42 Below Manuka Honey Vodka at the Salon Internationale Award in Paris. In 2006, they had a grand slam of gold medals at all major spirit awards, a testimony to their superior positioning and unique understanding of opportunities that they so vigorously pursued.

When Bacardi announced its takeover offer, 42Below has just posted a total of \$7.2 million in revenue but reported a half-yearly loss of \$2.7 million. This is a significant drop from its reported loss the previous year of \$5.10 million. Over the previous 12 months it achieved a 32% increase in revenue and the cash flow from operating activities showed a 71% improvement. The number of cases sold increased by 60.6% from the previous year. They have re-invested profits into company expansion especially in the very competitive US market. With this statistics, it is no surprise that 42Below was judged the fastest growing exporter, fastest growing listed company and fastest growing company overall by Deloitte.

Case 2: Penderyn Whisky

Nestled in the foothills of the ancient Brecon Beacons is one of Wales' best kept secrets: Penderyn Distillery (formerly known as the Welsh Whisky Company). It is the only distillery in Wales and the first to legally distil whisky spirit for 100 years. Wales is known for many things but for whisky it is not. So without the passion for the uniqueness of the product, the distillation process and its natural heritage, who would have believed that this little known company would succeed in such an established market, historically dominated by Scottish, Irish and American brands?

The Welsh Whisky Company founded in 1998 with an original capital investment of £130,000 sold its first bottle of Penderyn finest single malt Welsh whisky in 2004. Owing to the lengthy maturation process, it was at least 5 years before the original shareholders were able to realise their dreams with the official launch of a Penderyn Whisky. The initial investment proved to be woefully short as whisky brewing is a long process where returns are long term. It is also a business that has proved to be cash hungry.

The real key to Penderyn's success however lies in its origin, Wales. By the company's own confession: "Penderyn is what the marketing people would call a discovered brand, discovered by the Welsh, who bought the whisky out of pride and passion." Four years on and these customers not only remain loyal to the brand but have helped to establish the brand in over 16 countries and 28 American states. Such a cult following of like-minded customers is an advantage given that the company does not need to actively promote its products overseas. Viral marketing within the home market and expatriate communities especially in the US and Australia, has proven more valuable and effective than any "traditional" marketing campaign. Unlike their larger

rivals this frees up capacity for Penderyn to concentrate their limited resources on the quality of the product.

Within the home market, the company also employs a number of seemingly “Welsh” PR strategies with high profile endorsements. For example, HRH Prince Charles, Catherine Jenkins, Charlotte Church, Bryan Terfel and First Minister for Wales Rhodri Morgan are all said to enjoy the Penderyn brand. Not afraid to experiment with new promotional techniques either, the company famously posted an out-take clip of Sian Lloyd, a renowned national weather presenter, dropping what can be considered a real clanger in one of their less successful TV advertising campaigns on You Tube. The Penderyn web blog also provides an opportunity for homesick customers to be involved with and belong to the larger Penderyn Whisky community as well as receive tip offs regarding special edition whiskies and other new products. Perhaps most cleverly, the creation of a unique members club limited to 200 members only which is fully subscribed, entitles members to many benefits. This includes discounts, free products and early availability of new expressions. All these heighten the exclusive feel of the product and overall brand experience.

It’s difficult to accurately place a value on the company as it remains in private shareholding. However it has a stock holding in excess of £10M at current prices and a growing asset base. The brand value is somewhat comparable with the stock holding value. This is very impressive for a company that produces about 350 casks of whisky per year, employs 30 people and survives without the need for a marketing department.

You can’t help but notice that the culture of the company also plays a crucial role in its development and growth. Words such as passion, quality, authenticity, emotion, pride and teamwork are common language to all at the Penderyn distillery. The word quantity is almost redundant in their vocabulary. Given that only one cask of whisky is produced each day and each only bottled when ready, small is certainly beautiful. The view of Stephen Davies, MD of Penderyn is that:

“it is fine for global brands who need to deliver many millions of cases of spirit consistently and with little or no variance, to use computers or prescribed systems to decide when to bottle. To our knowledge, however unlike on Star Trek no existing computer has an emotion chip. We will continue to leave it to our Master Distiller Jim Swan, (not Jim Kirk) to decide when our whisky is at its best”.

In the early days and unlike traditional product expansion and diversification strategies the management team was forced to introduce a number of other related products (Brecon 5 Vodka, Brecon Gin and Merlyn Cream) in order to generate sufficient cash to fund and launch Penderyn’s core whisky products (Madeira and Peated finished whiskies). The company now focuses on producing different expressions of its whisky and limited editions such as the Grand Slam 2005 and 2008, and the Penderyn Welsh Rugby Union 125th Anniversary edition which command a high price amongst whisky connoisseurs. A millennium cask bottle and miniature in a presentation box will currently cost the buyer £499.

For anyone who has visited the Penderyn Distillery Visitor Centre, which receives between 20,000 and 25,000 visitors per year, it would be hard not to notice that the company manages to successfully marry respect for tradition with passion for innovation. To examine this further it is important to note that the three crucial ingredients of any fine whisky are water, which is combined with the core spirit, the type of still used in the distillation process and the wood from which the casks used to store the whisky are made.

The distillery is based in the ancient Welsh settlement of Penderyn in the Fforest Fawr National Park, one of 53 geoparks across the globe with geological heritage and significance. The area is also said to be surrounded by legend and folklore and is renowned for its moorlands, valleys, flowing streams and waterfalls. It is from this source that the first key ingredient to this superior product comes from, natural spring water, pure, clean and most definitely Welsh.

The production of malted barley spirit is unique in its own right and was designed by Dr David Faraday (a direct descendant of the famous physicist Sir Michael Faraday). Unlike Scottish and Irish stills which use either a two or three pot system, the barley wash (supplied by local brewer S. A. Brain & Co in Cardiff) is stilled in a single copper pot system. Unbelievably to some the concept for this system stems from technology used in the oil refining industry. The spirit is said to arrive at the spirit safe at an industry high of 92% A.B.V. and is virtually free of chemical compounds.

With no expense spared the whisky is firstly matured in Buffalo Trace and Evan Williams (a Welshman and one of the original founders of the American bourbon industry) bourbon casks, sourced from Kentucky and Tennessee, and finally finished in Madeira barriques from Portugal. The casks alone have a rich history and are a story in their own right.

Amazingly, the heritage of these fine ingredients helps to produce one of the most contemporary whisky brands in the market. The packaging is crisp, clean, stylish and modern. The flavours are daringly different. The overall proposition is a truly distinctive, unique product, the only Welsh Whisky on the market.

But just how did Penderyn manage to create space in the market? A rather different version of the Dafydd (Penderyn's David) and Goliath (Tesco, one of the UK's leading food retailers) story waits to be told. The legend goes that Dafydd fought his way across the moorlands, his armour decorated with many prestigious international awards and medals (96.5 points in Jim Murray's Whisky Bible 2009 to be precise) only to be met by Goliath and his army of over 300 stores across the UK. Both laid down their weapons, shook hands, took a toast of Penderyn whisky to mark the occasion, and as for the rest, well that's history. In all fairness to the Penderyn management team this is not far from the truth. The quality of the product spoke for itself and the full product range is now promoted and sold in Tesco as products of regional significance.

With regards to exports, at a time when it appears the whole world seems to have gone on-line mad, it would appear that Penderyn is an on-line laggard, but this is not so. Unlike in the UK and in the US in particular, Penderyn is limited to distributing its products through formal distribution channels, comprising of a three tier system of importer to distributor to retailer owing to strict legislation which inhibits direct sales of alcohol via the internet. Given that the company only produces one cask of whisky per day, this may in fact be more of a help than a hindrance. The company employs a strict allocation procedure serving the home market first, which is inconceivable to marketing purists. Nevertheless this limited allocation seems to strengthen the brand's brand image and creates a further perception of exclusivity, which in the whisky market is "pure malt marketing."

That is the story of Penderyn Distillery a true non-marketing success. Daring to be different in every aspect of its existence and growing despite the odds and for want of knowing any better. As 'Scotty' the long suffering engineer of the Star Ship Enterprise would perhaps have said: It's whisky Jim but not as we know it! Alternatively, not forgetting their own entrepreneurial marketing heritage perhaps it's: "marketing' Jim but not as we know it?"

Results and Discussion

A comparison of the two cases revealed some distinct similarities and a few differences. We find that both companies have employed entrepreneurial marketing approaches but with different intensities. While acknowledging that they are different from the norm, the specifics of their individual approaches are dissimilar. Both companies have positioned their products at the premium end of their product categories and have emphasised quality and awards in their communication strategies. Overall, it appears that both 42Below and Penderyn Whisky enjoy success as evidenced by industry awards and international acclaim. A unique distinguishing feature of both cases is the exceptional following of customers they have attracted who are conspicuous in their consumption of the product. Table 1 features the details that highlight the evidence of entrepreneurial marketing from both companies.

Table 1

Comparative Evidence of EM from the Two Cases

EM Element	42 Below Evidence	Penderyn Whisky Evidence
Opportunity - driven	Availability of pure vodka ingredients from	Availability of pure ingredients from Wales

	<p>NZ NZ viewed as clean and green Branding campaign New segment emerging (cocktail elite) New overseas trends in flavoured spirits Bartenders as gatekeepers</p>	<p>Distilling tradition within Wales – non-legal Growth of brand Wales Passion about product with early investors World wide expat communities Rivalrous attitude amongst Celtic countries (Ireland/Scotland/Wales)</p>
Pro-activeness	<p>Non-PC approaches to marketing campaigns Risqué and witty viral marketing campaigns</p>	<p>Non-Marketing: marketing campaigns Instinctive awareness of Tribal market</p>
Innovation-focused	<p>6-stage distilling process Distinctive bottling New flavours: kiwi fruit, manuka honey, feijoa, passionfruit</p>	<p>Unique distilling process – oil industry based technology to create the highest purity Limited edition products to correspond with Welsh sporting success</p>
Customer intensity	<p>The “cocktail elite” segment consumes products they discover themselves Media-savvy and rejects mass advertising Lovemarks and other blogs</p>	<p>Tribal nature of user community PR driven – developing Welsh contextual meaning Elite members club High profile Welsh celebrity endorsements</p>
Risk management	<p>Looking after the gatekeepers Used entrepreneur’s personal networks Created a fashion brand Public float</p>	<p>Directors networks key Honesty and quality Serendipitous connections Create a connoisseur brand Private ownership</p>
Resource leveraging	<p>Sourcing unique ingredients: purest water; GE free wheat Annual cocktail world cup (Queenstown)</p>	<p>Sourcing unique ingredients: Purest water, SA Brains mash, Madeira casks Whisky Bible entry Country of origin:</p>

	Country of origin: unashamedly New Zealand emphasis Outsourcing production Multiple international awards	unashamedly Wales (but not stereo-typed logos) Unique distillation process producing the highest purity Non conformity of production
Value creation	Product: new vodka flavours, gin, rum and water Premium pricing Highly selective distribution (top bars frequented by target market) Non traditional promotion strategies: Selling stories meaningful to target market	Product: highest graded quality and non conformity of production Premium pricing Low volume Distribution amongst expat communities Authenticity Members club Non-marketing marketing

Opportunity-driven

Having been established about the same time, both companies seized opportunities that were already established (e.g. ingredients) constantly present (e.g. national pride and culture) and those emerging in the market (new customer segments). It appears that loyal customers organically evolved from those who were able to identify and make a connection with the country-of-origin of the product and the symbolism that this brings. Expatriate customers contribute greatly to the word-of-mouth/viral effect that saw the products succeed without the usual hype created by costly marketing campaigns. This is highlighted by the “tribal market” concept identified by Penderyn Whisky and the “cocktail elite set” by 42Below.

Pro-activeness

Both companies are pro-active in identifying/looking for opportunities to promote their products in non-traditional ways. 42Below opted to be non-politically correct by tackling sensitive issues and generating publicity and awareness. Penderyn Whisky seized on the Celtic connection and the rivalry between the Celtic countries to push for tribal attachment (i.e. unite behind the common cause).

Innovation-focused

Being in the same industry lends focus to the comparison especially in innovation. Being both premium producers, quality throughout the value chain has been sought by both companies. In distilling, 42Below uses a multi-stage process whereas Penderyn uses advanced technology to generate purity. Given the trend towards flavoured

spirits, 42Below has been quick to introduce exotic flavours highlighting its contemporary approach to innovation. Penderyn mixes oil-based technology with the age-old tradition of wooden casks albeit sourced from the best in the world.

Customer Intensity

This dimension perhaps captures the success of their entrepreneurial approaches. Both companies have identified unique market segments and tailored inexpensive ways to reach them with non-traditional marketing activities. Highly visible endorsements from celebrities (Wales) and the Cocktail World Cup (NZ) are two examples. The result is a highly loyal following of customers not shy to flaunt their love for the products on the web and other media.

Risk Management

Although both companies used bootstrapping techniques at the outset, these were insufficient if growth was to be pursued. Having small domestic economies, the internationalization route was done selectively where there were pockets of customer segments such as expatriates. Both companies had used their personal and business networks (sometimes serendipitously) as sources of additional finance, shareholding and creative ideas. To scale to the world, 42Below went public very quickly and realized fast growth, albeit becoming an acquisition target for Bacardi Ltd., whereas Penderyn has remained private; two different ways of managing financial risks.

Resource Leveraging

There is overwhelming evidence that both companies have leveraged their access to unique ingredients, technology and their countries-of-origin to gain competitive advantage. It is perhaps the opportunistic nature of this approach that makes it entrepreneurial. They have found international acclaim for their products over a short period of time and used these awards to propel them forward.

Value Creation

If marketing is about creating value, both cases have demonstrated almost similar ways of how this is done using the elements of the marketing mix. The combination of very high quality products, with premium pricing, distributed selectively to a targeted customer base and promoted in non-traditional ways sum up the EM process albeit in a selected context.

Conclusion and Managerial Implications

The aim of this study was to explore evidence of entrepreneurial approaches to marketing activities using two comparative cases. Based on an established framework, we investigated this and found that in both cases EM was employed successfully.

42Below has carved an image of irreverence and being non-conformist. They have unashamedly utilised viral marketing and entered international markets by training

bartenders and hosting unconventional events. They use edgy language and unashamedly leveraged their host country resources to promote their flagship product. Penderyn Distillery has taken a more traditional approach to marketing their products and portraying romantic images of folklore and age-old tradition of distilling as key to their positioning but keeping up with innovation and customer focus.

Both cases illustrate that a non-conformist approach to marketing suits the entrepreneurial firm within this type of industry. Whether this type of activity is called EM or perhaps more specifically 'Contextual Marketing' there is without question some identifiable commonalities that are at the heart of its meaning and operation within the small firm.

Such commonalities revolve around the quality and authenticity of the product which linked to a shared passion. In Penderyn's case, for Wales and Welsh product within a global market – the reality is that there are precious few Welsh products that fall within the FMCG category and as such perhaps they carry greater value to the expat and home customer. Exclusivity of distribution and the non conformist nature of the production fall within the Welsh psyche and pursuance for the non traditional, so it perhaps follows that the marketing approach will reflect that psychological construct. In essence the firm displays an approach that is highly contextual, in that it is situation specific, experiential, context rich and has a high level of social construction linked to authenticity and national pride. Penderyn is driven by passion to produce highest quality product available and a desire to get one over on the Irish and Scots. They are driven by *Balchder Cymru* (the pride of being Welsh) and it is this passion for and affinity with their country whether it is New Zealand or Wales that somehow give meaning and context to the market.

It must also be noted that there is a central figure driving these entrepreneurial approaches. It matters not whether it is a Chief Vodka Bloke (Geoff Ross), a Master Distiller (Jim Swan) or some other person within the company, the push to be non-conformist and non-traditional can succeed within a specific context as those illustrated by the two cases in this study.

Additionally, it must be highlighted that while the argument for context is well-articulated in this study, it must also be noted that the cases are industry-specific and evidence here may not necessarily be generalisable to other settings. This however brings to the fore the need to explore EM in different contexts such as across different industry sectors, different stages of business maturity and size of companies. For example, there is still much that we do not know about EM in larger firms or smaller SBUs within a large corporate family such as one 42Below finds itself in, now that it has become part of a huge global company. With Bacardi Ltd's resources, the question is: will 42Below remain entrepreneurial and in the same token will it still have the freedom to be so given a different corporate setting? As for Penderyn, being in private ownership lends freedom to implementing innovative strategies. If Penderyn was acquired by a bigger (non-Welsh) company, would it still be entrepreneurial or would it fall into a conformist regime?

Finally, one may argue that EM or as has been implied here, CM (contextual marketing) simply accepts that the marketing function within the firm is less about management and more about social context. Further one could argue that EM/CM revisits and updates the marketing concept in light of the paradoxical failure of

“marketing management” to “deliver on the promise.” Certainly what the cases show and what EM/CM accepts is that marketing is contextual and cultural, a blend of anthropology, sociology, psychology, applied economics, linguistics and serendipity is where the variances will always outnumber the commonalities.

References

- Bennett, R., and R. Cooper (1981). “The Misuse of Marketing: An American Tragedy,” *Business Horizons*, 24(6), 51-60.
- Bennett, R., and R. Cooper (1984). “The Product Life Cycle Trap,” *Business Horizons*, 27(5), 7-16.
- Bjerke, B., and C. Hultman (2002). *EM: The Growth of Small Firms in the New Economic Era*, Edward Elgar: Cheltenham.
- Brockhaus, R.H. (1982). “Psychology of the Entrepreneur” In Kent, C.A., D.L. Sexton, and K.H. Vesper, (Eds.) *Encyclopedia Of Entrepreneurship*, Prentice Hall: Englewood Cliffs.
- Brown, S. (2001). *Marketing - The Retro Revolution*, London: Sage.
- Brown, S. (1995). *Postmodern Marketing*, London: Routledge.
- Brownlie, D., and M. Saren (1997). “Beyond the One-Dimensional Marketing Manager: The Discourse of Theory, Practice and Relevance,” *International Journal of Research in Marketing*, 14, 147-161.
- Carson, D. (1999). “An Inaugural Commentary for the Journal of Research in Marketing and Entrepreneurship,” *Journal of Research in Marketing and Entrepreneurship*, 1(1), 1-4.
- Carson, D., and N. Coviello (1995). ‘Researching the Marketing/Entrepreneurship Interface’, UIC/AMA Research Symposium on Marketing and Entrepreneurship, Melbourne, Australia.
- Carson, D., and S. Cromie (1989). “Marketing Planning in Small Enterprises: A Model and Some Empirical Evidence,” *Journal of Marketing Management*, 5(1), 33-49.
- Carson, D., M. Enright, A. Tregear, P. Copley, A. Gilmore, D. Stokes, C. Hardesty, and J.H. Deacon (2002). “Contextual Marketing,” *7th Annual Research Symposium on the Marketing – Entrepreneurship Interface*, Oxford Brookes University, Oxford.
- Carson, D., M. Enright, P. Copley, J.H. Deacon, A. Mcauley, and A. Gilmore (2003). “Contextual Marketing: The Language/Vocabulary of Marketing in SMEs,” *8th Annual Research Symposium on the Marketing - Entrepreneurship*

Interface, The University of Gloucestershire Business School, University of Gloucestershire, Cheltenham.

- Carson, D., and A. Gilmore (1999). "Characteristics of SME Marketing and a Conceptual Framework," *Proceedings of the Academy of Marketing Conference*, University Of Stirling, 340 – 358.
- Carson, D., and A. Gilmore (2000)., "Marketing at the Interface,: Not 'What' But 'How'," *Journal of Marketing Theory and Practice*, Spring 2000; 8(2) 1-7.
- Carson, D., A. Gilmore, and K. Grant (2001). "SME Marketing in Practice," *Marketing Intelligence and Planning*, 19(1), 6 – 11.
- Chaston, I. (2000). *Entrepreneurial Marketing: Competing by Challenging Convention*, Basingstoke: Palgrave.
- Chetty, S., and C. Campbell-Hunt. (2004). "A Strategic Approach to Internalization: A Traditional Versus a "Born-Global" Approach," *Journal of International Marketing*, 12(1), 57-81.
- Copley, P. (2002a), "What is SME Business-to-Business Marketing Really?" In: Carson, D., M. Enright, A. Tregear, P. Copley, A. Gilmore, D. Stokes, C Hardesty, and J.H. Deacon (2002). 'Contextual Marketing', *7th Annual Research Symposium on the Marketing – Entrepreneurship Interface*, Oxford Brookes University, Oxford.
- Copley, P. (2002b), "What will be the Effect on Education, Training and Development of Entrepreneurs and Smes of a New Marketing Paradigm that is Required for a Form of Competitive Advantage," *Proceedings of the Institute for Small Business Affairs*, 25th ISBA National Small Firms Policy and Research Conference: Brighton.
- Covin, J.G., and D.P. Slevin (1989). "Strategic Management of Small Firms in Hostile and Benign Environments. *Strategic Management Journal*, 10 (January), 75-87.
- Deacon, J. H., (2002) "Contextual Marketing - Commonalities and Personalities - Fuzzy Experiential Excellence," *UIC Research Symposium: American Academy of Marketing*, San Diego State University, San Diego.
- Deacon, J.H., and J. Corp (2004). "Re Enterprising your Warped Drive," *Proceedings, 9th Academy of Marketing Symposium on Entrepreneurial and Small Business Marketing – Ensuring a Creative Future for Entrepreneurial Marketing*, University Of Stirling, January 7-9 2004.
- Earls, M. (2002), *Welcome to the Creative Age: Bananas, Business and the Death of Marketing*, Wiley: Chichester.
- Enright, M. (2001), "Approaches to Market Orientation and New Product Development in Smaller Enterprises: A Proposal for a Context-Rich

Interpretive Framework,” *Proceedings of the Academy of Marketing Annual Conference*, Cardiff, Wales 2-4 July.

- Enright, M., A. Tregear, P. Copley, A. Gilmore, D. Stokes, C. Hardesty, and J.H. Deacon (2002). “Contextual Marketing,” *7th Annual Research Symposium on the Marketing – Entrepreneurship Interface*, Oxford Brookes University, Oxford.
- Forsyth, S., and J. Greenhough (2003). “CIM Study: *Marketing and the Small Business Leader: A New Perspective*,” Chartered Institute of Marketing Library, Moor Hall: Cookham England.
- Fuller, P.B. (1994), “Assessing Marketing in Small and Medium-Sized Enterprises,” *European Journal of Marketing*, 28 (12), 34-49.
- Grewal, D., and M. Levy (2008). *Marketing*, McGraw-Hill Irwin: N.Y.
- Gronroos, C. (1997). “From Marketing Mix to Relationship Marketing – Towards a Paradigm Shift in Marketing,” *Management Decision*, 35 (3), 322-340.
- Grunhagen, M., and C. Mishra (2008). “Entrepreneurial and Small Business Marketing: An Introduction,” *Journal of Small Business Management*, 46(1), 1-3.
- Hamel, G., and C. Prahalad (1994). *Competing for the Future*, Harvard Business School Press: Boston, MA.
- Hills, G.E. (1987). “Marketing and Entrepreneurship Research Issues: Scholarly Justification,” *Research at the Marketing/Entrepreneurship Interface*, G.E. Hills (Ed.), University Of Illinois At Chicago, 3-15.
- Hills, G.E. (1999). “An Inaugural Commentary for the Journal of Research in Marketing and Entrepreneurship,” *Journal of Research in Marketing and Entrepreneurship*, 1(1), 5-7.
- Hills, G., and C. Hultman (2008), “History and Some Theoretical Foundations of Entrepreneurial Marketing,” *Proceedings, 22nd UIC International Research Symposium on Marketing and Entrepreneurship*, Stockholm, 15-16 June.
- Hills, G., C. Hultman, and M. Miles (2008). “The Evolution and Development of Entrepreneurial Marketing,” *Journal of Small Business Management*, 46(1), 99-112.
- Hills, G., and R. La Forge (1992). “Research at the Marketing Interface to Advance Entrepreneurship Theory,” *Entrepreneurship Theory and Practice*, Spring, 33-59.
- Hisrich, R. (1989). “Marketing and Entrepreneurship Interface.” In G.E. Hills, R.W. Laforge, and B.J. Parker (Eds.), *Research at the Marketing Entrepreneurship Interface*, 3-17, Chicago: University of Illinois at Chicago.

- Hulbert, B., J. Day, and E Shaw (1998). *Proceedings of the Academy of Marketing and UIC/MEIG-AMA Symposia on the Marketing and Entrepreneurship Interface*, Nene University College, Northampton.
- Kay, J. (1995). "Learning to Define the Core Business," *Financial Times*: 01.12.95
- Keller, K.L. (2001). "Building Customer-Based Brand Equity: A Blueprint for Creating Strong Brands," *Marketing Management* 10 (July-Aug): 15-19.
- Kets De Vries, M. (1977). "An Entrepreneurial Personality: A Person at the Crossroads," *General Management Studies*, 14 (1) 41-53.
- Mankellow, G, and B. Merrilees (2006). "Towards a Model of Entrepreneurial Marketing for Rural Women: A Case Study Approach," *Journal of Developmental Entrepreneurship*, 6(3), 221-235.
- Mcclelland, D. C., and D. G. Winters (1969). *Motivating Economic Achievement*, Free Press: New York.
- Miles, M., and D. Arnold (1991). "The Relationship Between Marketing Orientation and Entrepreneurial Orientation," *Entrepreneurship Theory and Practice*, Summer, 49-65.
- Miles, M., and J. Darroch (2006). "Large Firms, Entrepreneurial Marketing Processes and the Cycle of Competitive Advantage," *European Journal of Marketing*, 40(5/6), 485-501.
- Moreno, A., and J. Casillas (2008). "Entrepreneurial Orientation and Growth of SMEs: A Causal Model," *Entrepreneurship Theory and Practice*, May, 507-528.
- Morris, M., and G. Paul (1987). "The Relationship Between Entrepreneurship and Marketing in Established Firms," *Journal of Business Venturing*, 2(3), 247-259.
- Morris, M., M. Schindehutte and R. La Forge (2002). "Entrepreneurial Marketing: A Construct for Integrating Emerging Entrepreneurship and Marketing Perspectives," *Journal of Marketing Theory and Practice*, Fall 10(4), 1-19.
- Morrish, S. (2009), "42Below: The Story of a Spirited Vodka Company," In: Walker, Gountas, Mavondo and Mullins (Eds.), *Marketing Strategy: A Decision-Focused Approach*. 1st Ed, McGraw Hill: Australia, 370-375.
- Palmer, A., and S. Ponsonby (2002). "The Social Construction of New Marketing Paradigms: The Influence of Personal Perspective," *Journal of Marketing Management*, 18(1-2), 173-192.
- Pride, B., and O. Ferrell (2009). *Marketing Express*, Houghton Mifflin: USA.

- Sarasvathy, S. (2001). "Causation and Effectuation: Toward a Theoretical Shift from Economic Inevitability to Entrepreneurial Contingency." *Academy of Management Review*, 26(2), 243-263.
- Schindehutte, M., M. Morris, and A. Kocak (2008). "Understanding Market-Driving Behaviour: The Role of Entrepreneurship," *Journal of Small Business Management*, 46(1), 4-26.
- Simmonds, K. (1986), "Marketing as Innovation: The Eighth Paradigm," *The Journal of Management Studies*, 23(5), 479-500.
- Stokes, D. (2000), "Putting Entrepreneurship into Marketing: The Processes of Entrepreneurial Marketing," *Journal of Research in Marketing and Entrepreneurship* 2(1), 1-16.
- Stokes, D., and W. Lomax (2002). "Taking Control of Word of Mouth Marketing: The Case of an Entrepreneurial Hotelier," *Journal of Small Business and Enterprise Development*, 9(4), 349-357.
- Vargo, S., and R. Lusch (2004). "Evolving to a New Dominant Logic for Marketing," *Journal of Marketing*, 68(1), 1-17.

Understanding the connection between social norms and entrepreneurial intentions

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This conceptual paper analyses why social norms are important for entrepreneurial intentions. 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. This paper does not attempt to treat all aspects of the concept of social norms. 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.

Track: 14. Other SME Related Issues

The effect of the study of enterprise units within traditional degree subjects on employability for University of Manchester graduates.

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Manchester Enterprise Centre (MEC) was set up from UK government funding in 2000 with the aim of embedding enterprise within the university curriculum. MEC has been offering enterprise units within science and engineering which are taught with an emphasis on experiential learning. Sufficient numbers of students have now graduated having taken at least one enterprise module to allow a comparison with those from the same cohort of students whom have not. Initial findings suggest students who have undertaken enterprise units have found themselves more employable in general and these transferable skills have differentiated themselves from others of their peer group.

Track: 14. Other SME Related Issues

Opportunity based-view in entrepreneurship and the role of prior knowledge and past experiences

By Amine Chelly¹

In this paper, we question the impact of entrepreneur's prior knowledge and past experiences on the process entrepreneurial opportunity identification process. Entrepreneurship literature, Austrian economics in particular, puts information at the heart of this question by explaining that while some entrepreneurs and not others identify opportunities is in fact due to the quantity (and quality) of information they already possess. We try to challenge these assumptions in the context of an exploratory study with a sample of Tunisian entrepreneurs.

Introduction

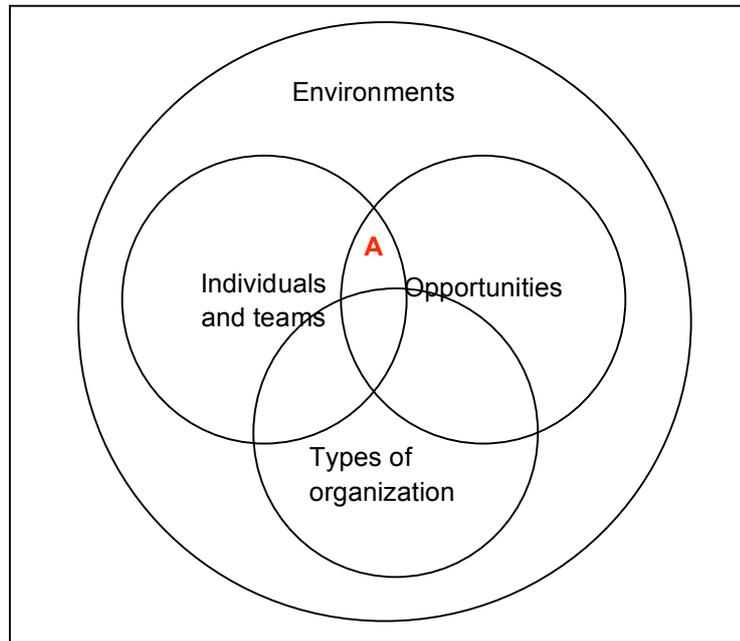
The growing interest for the concept of opportunity is very remarkable in the definitions given to entrepreneurship by several researchers these last years (Bygrave and Hofer, 1991; Churchill and Muzyka, 1994; Shane and Venkataraman, 2000). However, in spite of its theoretical and practical importance, researches on the concept of opportunity were conducted in entrepreneurship only during these last fifteen years. Indeed, if we look at the various number of articles published in the "Frontiers of Entrepreneurship Research" review, which constitutes one of the famous references in entrepreneurship research in the world, we notice that opportunity started to be regarded as being a research area only in 1997, after other areas like the entrepreneurial process or female entrepreneurship. However, studies on opportunities have already been presented at the Babson College conference before 1997, but without having a session clearly identified. Indeed, in 1990, there was only one article dealing with opportunity identification which is the work of Christensen and Peterson (1990). In 1991, the session was called "innovation and opportunity identification" in which we find two contributions, Vesper (1991) and Ray (1991). Opportunity identification would thus have received only little attention whereas it constitutes a critical element in the entrepreneurial process.

This tendency is confirmed by the work of Busenitz and al. (2003). Indeed, these authors noticed that "with the exception of the opportunities category, all of the other areas in and of themselves have received extensive research attention from other areas of management as well as non-management disciplines" (Busenitz and al., 2003: 297). This might suggest that opportunities could become the single field of entrepreneurship. According to Busenitz and al.

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(2003), research on the nexus of figure 1 is of a primary importance for the development of entrepreneurship as a field of research.

Figure 1: Conceptual domain of entrepreneurship as a field (Busentiz and al., 2003: 297)



The individual (or teams) - opportunities nexus (noted A in Figure 1) focuses on the process of recognition, evaluation and exploitation of opportunity. One of the most central question researches investigated in this area consists on answering why certain individuals, and not others, identify certain opportunities and not others (Shane and Venkataraman, 2000). The way this question is asked pushes us to try to understand the relationship that exists between certain individuals and certain entrepreneurial opportunities and vice versa.

Prior knowledge (Shane, 2000; Shepherd and DeTienne, 2001) and entrepreneur's past experiences (Ucbasaran et al., 2003) were identified in the literature as being important factors for opportunity identification. Indeed, individuals are more alert to information that is related to their prior knowledge and/or information about fields they are interested in. While all individuals are not alert to the same information in the same field or to the same fields at the same time, an information asymmetry exists then between them. According to Hayek (1945), this information asymmetry is at the essence of entrepreneurship.

Based on a qualitative study with 25 Tunisian entrepreneurs (25 interviews with Tunisian male and female entrepreneurs issued from 9 different sectors) on the entrepreneurial opportunity identification processes, we try to show if prior knowledge and past experiences of Tunisian entrepreneurs have an impact on opportunity identification in a specific environment and culture. We also show which specific knowledge and specific experience play a role in the entrepreneurial opportunity identification process (recognition, evaluation and exploitation) within this group of entrepreneurs.

1. Entrepreneur's Prior Knowledge

Entrepreneurship literature identifies entrepreneur's prior knowledge as a factor influencing entrepreneurial opportunities identification. This hypothesis is based on the importance given

to information. Indeed, the Austrian school proponents give it a great importance. Hayek (1945), for example, believes that entrepreneurship exists because of the amount and nature of information held by an individual. In other words, the asymmetry of information between individuals is the source of market imbalances and, therefore, the existence of entrepreneurial opportunities (Kirzner, 1997). Von Hippel (1994) also argue that individuals 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 concerning this and will not pay attention to information that relates to other areas they do not know.

In the same vein and based on Austrian economists, Shane (2000: 448) argues that "entrepreneurs discover opportunities related to information they already possess », it means opportunities related to their prior knowledge. Indeed, according to Shane (2000), having a prior knowledge triggers the identification of the value of new information. He distinguished three major dimensions of prior knowledge that are important for entrepreneurial opportunities identification: people's prior knowledge about market, the people's prior knowledge about how to serve markets and people's prior knowledge of customer problems.

In his qualitative study of eight different companies that were established on the basis of eight different opportunities from a single technological innovation from the MIT, Shane (2000) has tested and confirmed a number of assumptions which may be summarized as follows:

- All individuals are not equally likely to recognize a given opportunity : the reasoning is based on the idea that all individuals do not have the same information at the same time, Kirzner (1997);
- Each person's idiosyncratic prior knowledge creates a "knowledge corridor" that allows him/her to recognize *certain* opportunities, but not others (Hayek, 1945; Ronstadt, 1988; Venkataraman, 1997). "Prior information, whether developed from work experience, education, or other means, influences the entrepreneur's ability to comprehend, extrapolate, interpret and apply new information in ways that those lacking that prior information cannot replicate". (Shane, 2003: 452).

We conducted an exploratory qualitative study with twenty five Tunisian entrepreneurs to try to understand the role of prior knowledge and past experience on opportunity identification. Indeed, qualitative studies are especially suitable for exploration and construction of hypotheses about a phenomenon not yet well known (Miles and Huberman, 2003). A qualitative study by multi-site semi-structured interviews, lasting an average of two hours, was conducted with entrepreneurs from different economic sectors. This research has an exploratory issue; we felt it necessary not to limit it to one area.

The entrepreneurs interviewed in this study have been contacted through our strong ties network. Our sample includes twenty five entrepreneurs who have already established a business (twenty three cases) or under development (two cases) at the time of the study (December 2008). We recorded all our conversations and we worked from the transcriptions. In total, we conducted fifty hours of interviews with twenty five individuals. The analysis was performed using the NUD*IST Classic software (Non-numerical Unstructured Data Indexing, Searching and Theorizing) in its 4th version (N4). This paper presents the results of our study on the role of entrepreneur's prior knowledge and past experience on entrepreneurial opportunity identification.

1.1. The Role of Prior Knowledge about Markets

According to Von Hippel (1988), the most important prior knowledge about markets should include information on relationships between suppliers, sales techniques, or capital investment.

Cooper (1981) emphasized on the role of knowledge in a given area as a major factor affecting the identification of business opportunities. He was the first author to suggest that prior knowledge would help to use people's experience in a specific area. Specific experience in a field is important because people can scan the market with alertness and find disequilibrium that can be corrected by creating a business (Kirzner, 1979). Moreover, according to recent research on the concept of "entrepreneurial alertness" developed by Kirzner (1979), it appears that the latter depends in part on knowledge and therefore the information possesses by each individual (Yu, 2001; Dimov, 2003).

Without possessing some knowledge about a certain domain, it is very difficult to interpret the signals of the information in the industry because the information processing is linked to existing knowledge structures such as knowledge about a particular sector (Manimala, 1992; Shane and Venkataraman, 2000). Past experience and prior knowledge of a field are needed to identify entrepreneurial opportunities that others fail to identify (Kaisha and Gilad, 1991). Knowledge about a domain is useful to select the useful information, give it a meaning and make the appropriate judgments. Human beings do not just collect information; they interpret and try to act as rationally as possible. However, people are also guided by the knowledge they have gained from their processes of perception, interpretation and action (Woo, Cooper and Folta, 1992; De Koning and Muzyka, 1996). It would appear from the foregoing that entrepreneurs who have less experience would miss important information, didn't understand all what they perceive and make inconsistent decisions.

Extract 1 shows that prior knowledge of the entrepreneur NA about the IT consulting market was critical to identify an opportunity and exploit it by creating his company in this market. Indeed, the information accumulated by NA was acquired thanks to his past experience in IT consulting companies at different positions.

"It was a professional context which, in my case, helped me by the fact that I have taken the time to work in an IT consulting firm, a similar area where I wanted to create a business in France and Tunisia. In both cases, I stayed 2 or 3 years, which means that finally I wasn't navigating in an unknown field, but I was surfing in an area where I saw all the things I wanted to do. Therefore, I knew about many processes such as customers' relationship management process, customer's problems solving processes. I also understood the steps to successful software development and the difficulties of organization and noticed the different tools we could use." (Interview 1 NA)

Extract 1 – The role of prior knowledge about markets

Extract 1 also shows that the intention of the entrepreneur NA to create a business in the IT field existed prior to his various jobs. He was, therefore, fully aware of information collection he was making through his experiences to achieve this goal. As he said himself: "I saw what I wanted to do." The accumulated knowledge is targeted and the information was sought and evaluated according to a precise objective: create a business in the same field where he has past professional experience.

Extract 2 illustrates our thoughts. Indeed, the entrepreneur RZ's experience has also served to get knowledge for the maturation of his business idea. These two examples support the hypothesis that prior knowledge about markets has an impact on entrepreneurial opportunity identification.

“Q: What was the impact of your past experience on your business idea?”

A: After my graduation, I started to work. I stayed one year in Morocco. I worked in Tunisia. I worked for Levi's at the beginning, and then I spent four years with the biggest company of clothing at that time in Tunisia. Prior to establishing my business, I accumulated a seven-year experience.

From the beginning, my objective was not to get a job with high wages and high responsibility such as “a manager”. I searched for positions that allowed me to learn about the production process. My goal was to know about everything about the garment and textile sector that interested me and where I wanted to begin later”. (Interview 17 RZ)

Extract 2 – Past experiences, sources of market knowledge

While entrepreneurs identify opportunities related to information they already possess (Shane, 2000), it is equally true that some entrepreneurs also identify opportunities which are not related to the field they already know or where they have accumulated professional experience. Extract 3 illustrates this argument.

“Q: What were the reasons that decided you to start your business?”

A: The idea came when I was a banker. I have been a manager in a big local bank in Sousse (the third big town in Tunisia) for five or six years, then regional director for five or six years. I started my career at the bank in the medium-term credit. This is precisely the service which deals with credit granting for businesses.

Why in the plastic industry? When I decided to start my own company, I asked myself: "in which sector?" I search a lot of information: I went to public institution where I found sectoral studies; I looked at the bank which companies had permanent cash and were in full development. I was in fairs, international trade fair in Italy, Tunis, etc. Finally, I selected 4 or 5 business ideas: one in the copper sector, another in the paper, a third one in bicycles and finally it was the idea the plastic”. (Interview 23 NB)

Extract 3 - Different knowledge lead to opportunity identification in a different sector

The entrepreneur NB, who was originally a banker, did not initially know about the area of plastic. Once his intention to start a business affirmed, he has selected four business ideas that had nothing to do with his previous experience. In this case, it isn't his prior knowledge that allowed him to identify an opportunity, but the new information and knowledge he has accumulated consciously to start his company. However, it is clear that his experience as a banker has helped him in the evaluation and implementation of his business plan. By prior knowledge we mean, here, the technical knowledge specific to a particular sector.

It appears from these examples that it isn't *always* prior knowledge about markets that is the unique factor to opportunity identification. There are other skills that have nothing to do with the area in which individuals start a business and are also crucial. We make a proposition that continue the work of Shane (2000):

Proposition 1: some entrepreneurs identify opportunities related to the knowledge they already possess while others identify opportunities related to the knowledge accumulated through their deliberate search for useful information.

In our sample of twenty five entrepreneurs, we found that there are sixteen entrepreneurs who have identified business opportunities in relation with their prior knowledge about markets. These sixteen entrepreneurs have established businesses in the same area where they had their last work experience. However, nine entrepreneurs in our sample have established their businesses in areas they did not know before, and in which they had no work experience before. It is clear that this sample is not representative, but these data (prior knowledge about markets has played a role in opportunity identification in sixty six percent of respondents) show that, in fact, entrepreneurs tend to identify opportunities related to knowledge about markets they already possess.

1.2. Identifying Solutions to Customer's Problems

Shepherd and Detienne (2001: 142) have shown that "prior knowledge of customer problems is positively correlated with the number of opportunities discovered and the innovativeness of those opportunities." Indeed, direct contact with customers allows an individual, potential entrepreneur, to discuss with people about problems they encountered by using a technology or a product sold by the company where he worked or a service that has not been satisfied.

This knowledge is of great importance for an entrepreneur to think about the solutions to consumer's problem. This information is possessed by some entrepreneurs and not by others (Shane, 2000). Indeed, not everyone had the same experience and met the same customers. On this point, the role of strong and weak ties network is very important to give the entrepreneur information about the problems they face with a product or service (Chelly, 2006). Therefore, the greater the relational network of the entrepreneur is extended, the greater the chance of having relevant information. This information asymmetry (knowledge of consumer's problems) has led to opportunity identification. Some individuals are more likely than others to discover opportunities because, precisely, they have knowledge that others do not (Hayek, 1945, Kirzner, 1979).

We haven't observed in our study a situation where prior knowledge about customer's problems was *the* important factor to opportunity identification, although in some cases, entrepreneur's knowledge of customers themselves was reported as an important variable to opportunity identifying (See extract 4). This result could be explained by the specificity of Tunisian culture. Indeed, the Tunisian culture is not a customer-oriented culture. Tunisian companies have ignored their customers and especially customer satisfaction for a long time. As the Tunisian market was not very competitive, it wasn't necessary for Tunisian firms to consider solutions to customer's problems. The situation was such that the existing products in the market were sold without much difficulty and without high marketing budget. This situation has changed significantly since the signing of a free trade agreement between Tunisia and the European Union. Faced with this situation and to ensure their survival, Tunisian companies have decided to be more responsive to their customers by offering products that meet their expectations. Only few Tunisian companies have successfully upgraded and moved towards their customers while the majority kept the same strategy which is for *only* profit. We find this way of thinking while interviewing our sample of entrepreneurs even though some of them (those who have completed their training abroad) declare that they take into consideration their customers' needs.

“I did a market survey before and I had an idea of my future customers. I contacted most of them before they actually launch the business. I explained the situation and they have welcomed the idea and told me they would help me in placing an order with me and that's what happened”. (Interview 23 NB)

Extract 4 - Knowledge of consumers, an important element for the entrepreneurial project

1.3. Identification of How to Serve the Market

According to Shane (2003: 452), "new information about a technology might be complementary with information about ways to serve markets, leading the discovery of entrepreneurial opportunities to require prior information about these processes." An entrepreneur's ability to recognize an opportunity in a new technology might be enhanced by prior knowledge about how the new technology could be used to create a new product or service (Shane, 2000).

In his study, Shane (2000) has validated the hypothesis that individual's prior knowledge on ways to serve markets influences their discovery of ways to use new technology to supply a market. In our study, we haven't achieved results on this type of knowledge. This is perhaps due to the lack in our sample of entrepreneurs in the high technology sector with which this hypothesis could be discussed. We think that this result is a particularity of the Tunisian economy where technological innovation is rare. However, these statements are qualified with the advent of Internet. Indeed, this new technology has allowed some Tunisian entrepreneurs to identify opportunities and create businesses which offer new services for customers who are not geographically in Tunisia but throughout the world.

The impact of prior knowledge of the different ways to serve the market is weighted according to the environment and culture of the entrepreneurs' country (Chelly, 2006). Indeed, we believe that such prior knowledge is useful only in connection with a new technology as shown by Shane (2000). It must first be available and accessible to potential entrepreneurs so they can increase their prior knowledge of ways to serve markets.

Prior knowledge and past experiences are interrelated because the information is acquired or possessed before. Knowledge may come from the experiences of everyday life or other experiences that we will analyze in what follows.

2. Entrepreneur's Past Experiences

Entrepreneurship literature has often noted the impact of past experience on opportunity identification. We argue that past experiences include work experiences, entrepreneurial experiences and associative experiences. We will shed the lights on the impact of these variables on opportunity identification within our study.

2.1. Work Experience

As presented in the previous section, experiences are an important factor for the entrepreneurial opportunity identification. Indeed, previous work experience enables the entrepreneur to have information about the market in which he/she operates. According to Venkataraman (1997), this information is idiosyncratic and enables some entrepreneurs and not others, identify opportunities in relation with information acquired during their past work

experiences. We are not going to present the results we have already presented in the previous section dealing with the impact of prior knowledge on entrepreneurial opportunity identification since we believe that market knowledge is the result of the entrepreneur's experience. However, we find other types of experience which we argue that plays a role in entrepreneurial opportunity identification.

2.2. Past Entrepreneurial Experiences

Past entrepreneurial experiences can have a positive or negative impact on the entrepreneur and the way he/she identifies a business opportunity. In their study on a sample of entrepreneurs who have already had a previous entrepreneurial experience, Ucbasaran and al. (2003) have shown that entrepreneurs who had past entrepreneurial experience identify opportunities that are more innovative than opportunities identified by those entrepreneurs without past entrepreneurial experience. They also showed that habitual entrepreneurs tend to think that opportunities often emerge with problems encountered and an identified opportunity often leads to another. According to Gaglio (1997), knowledge accumulated by entrepreneurs during their past entrepreneurial experiences runs their attention, their expectations and interpretation of market stimuli.

Past entrepreneurial experience enables entrepreneurs to acquire routines and ways of doing things that allow them to focus on finding relevant information and useful in a specific area (Ucbasaran and al., 2003). In addition, Ronstadt (1988) argues that the best opportunities occur only when an individual is involved in a business where flowing much of the information on contacts, viable markets, products and strategic resources available. This information is acquired when the individual is "at the heart of a company" and when he/she is him(her)self engaged in an entrepreneurial process of business creation.

Extract 5 shows that the entrepreneur DL's past entrepreneurial experience, even if they failed, were rich in knowledge and information resources. He has indeed accumulated knowledge and experience that allowed him to be more efficient in managing his latest entrepreneurial project. The knowledge he has acquired isn't technical or related to the industry, but rather of knowledge about the process of starting a business. Repeating the process of setting up a business after failing earlier allows an entrepreneur not to make the same mistakes even if it is true that failure can be a source of demotivation. The case of the entrepreneur DL is representative of this situation since he says "I do it faster" because he "knows what to do and where to go."

“Q: What have you learned from your past entrepreneurial experiences?”

A: This is something relatively simple. This does not scare me today. I tried to do it in France. People will make a mountain but it is not difficult, it is a matter of time and patience. We must have in mind how we will get there. Now, after my experience, I'm fast because I know what to do and where to go. I also learned to pay attention to my partners, even my close friends. We should never do business with friends or family members. The experience I had in France taught me that. It is best to do business with persons from your weak ties network. You will have much less chance to get angry with them”. (Interview 18 DL)

Extract 5 - Lessons from past entrepreneurial experience

Extract 5 also shows that the entrepreneur DL's past entrepreneurial experience introduced a new element on his perception of the partners in an entrepreneurial project. Indeed, the

entrepreneur DL concluded his previous failures that associates should not be members of his strong ties network (Granovetter, 1973) because affective confusion could be a source of problems. Although this element is not directly related to entrepreneurial opportunity identification by the entrepreneur DL, it is, nevertheless, important because the entrepreneur DL has learned from his failure and his future will be influenced by his past entrepreneurial experience.

We believe, therefore, that past experiences influence the entrepreneurial process of entrepreneurial opportunity identification even if it is knowledge gained through these experiences which is the most important. We also believe that past entrepreneurial experience provide the entrepreneur by know-how information, practical and procedural knowledge (Huybens, Dubruille and Bonami, 1993) very useful for starting a business.

2.3. Associative Experiences

Individuals' associative past experiences are, in some situations, at the origin of a business idea and influence, therefore, entrepreneurial opportunity identification. In our interviews, we have not directly confirmed this proposition. However, we noted, in some cases, that associative experiences of some Tunisian entrepreneurs had an impact on their intention to create a business to the sense that these experiments are involved in the demystification of the entrepreneurial act and makes the individual to business creation. In other cases, the associative experiences have an indirect impact on the identification of entrepreneurial opportunities. We did not find in the literature in entrepreneurship works that have highlighted explicitly associative experiences as a factor influencing the process of identifying entrepreneurial opportunities.

As part of participation in an association, the entrepreneur may be required to assume responsibilities within the association, to take initiatives, to discuss decisions regarding the strategy of the association and to participate in searching for new ideas. In short, participating in the life of the organization. Extract 6 illustrates this point.

“Q: If I understand you did not find the idea of starting a business when you were young?”

A: That's true. I was only thinking of that. In fact, when I was at school, I spent all my time at the “Junior Enterprise”. When I say “my time” it means is 70% of my time. The JE is the Junior Enterprise. It is the best school in the world to hone ones entrepreneurial spirit. Indeed, this is where I became interested in entrepreneurship and, above all I began telling myself that I wanted to create something.” (Interview 6 HZa)

“Q: What this experience brought to you?”

In the Junior Enterprise, we really hit the whole system. We had all the real problems to solve like cash problems. In addition, in this kind of association, you always have problems with the former office because it is always poorly organized. We were rubbed to all of governmental institutions because we had employees in the association. This experience has given us a taste of what a company can be.” (Interview 21 MMah)

Extract 6 – Lessons from past associative experiences

Entrepreneurs HZa and MMah's association experiences are specific and have finally played an important role in their decision to create a business. Indeed, the association “Junior Enterprise” is very important for students in business schools. This association is a miniature

of what entrepreneurs face in “real” business. As the entrepreneur MMah said: “the experience of the Junior Enterprise has given us a taste of what a company can be.” Being in contact with the various authorities has contributed to the entrepreneur MMah’s knowledge development in terms of non-technical know-how. The entrepreneur HZa’s experience in the same kind of association has also been successful in terms of knowledge accumulation. The entrepreneur HZa says that the Junior Enterprise is “the best school to hone ones entrepreneurial spirit.”

Other kinds of associative experiences, apart from the Junior Enterprise of the major schools, have a stronger impact on the entrepreneur in the sense that they affect in some way opportunity identification. The entrepreneur SS’s experience is a perfect example. Indeed, his experience with Tunisian Boy Scouts allowed him to learn how to behave in society, to share, to take responsibility at an early age, and be empowered to become independent. The education he received from the scouts opened his eyes to an element which has proved, later, the key to its business idea. Extract 7 illustrates this point.

“* What have you learned from your experiences?

Since I had 6 years-old, I joined the Boy Scouts of Tunisia because my mother died when I was young. In Boy Scouts, I learned to work in teams, to share with others, to show solidarity, to think too. It allowed me to quickly become a very sociable. When I was young at the boy scouts, they call me on “manager” because I was planning all the time our exits and I had a little leadership. This training in the Boy Scouts made me aware of my abilities as a manager and my abilities especially as a good speaker who can communicate with others. So I kept the spirit of communication. When I started thinking about launching my own business, I always favored ideas that revolved around communication. If you want the training that I had in scouts served me well to guide my thinking and ideas to what I can do best: communicate”. (Interview 4 SS)

Extract 7 - L'impact des expériences associatives antérieures sur l'idée d'affaires

Having an associative experience like the Boy Scouts is a trainer for an individual in the sense that the individual incorporates it at an early age. Scouting's mission is to build the personality of the child to develop his talents and vision of the world in a context of sharing and mutual assistance with all the young scouts. For the entrepreneur SS, the experience of scouting has been the source of his business idea. Indeed, he has learned not only the importance of communication with others to survive and to enjoy in a group, but also to distinguish it from other members who compose it: “I had a little leadership.” Thus, when he had the intention to create a business, his thinking was "naturally" turned to the communications’ sector. The Boy Scouts experience was not a direct source of business idea, but it has, indirectly, an impact on the raising, on the one hand, the taste of entrepreneurship, of leadership, and on the other hand, the importance of communication between individuals.

It would therefore seem that associative experiences of Tunisian entrepreneurs in our sample have no direct impact on entrepreneurial opportunity identification. However, we can make a proposition about the impact of prior associative experience on the intention to create a business. We therefore believe that:

Proposition 2: Earlier commitment in associations increases individuals’ desirability for starting a business.

3. Discussion and Conclusion

As we have seen, past experiences have an impact on entrepreneurial opportunity identification within a sample of Tunisian entrepreneurs. It must be noted that all past experiences do not have the same impact. Indeed, past experiences, which provide the business knowledge and especially information that other entrepreneurs do not necessarily hold (Venkataraman, 1997), undoubtedly influenced the identification of business opportunities. The knowledge accumulated by the Contractor to provide market information that are, in some cases, it will identify a business opportunity that others will not because they do not have the same knowledge and information as it. Past professional experiences confined, however, the entrepreneur in a single field which hampers its ability to identify opportunities in other sectors (Minniti and Bygrave, 2001). Like prior knowledge of markets, past experience is a variable that influences entrepreneurial opportunity identification.

As for Prior entrepreneurial experiences, we cannot generalize our results because of the small size of our sample of entrepreneurs. However, we can say that these factors influence the entrepreneur in his/her approach to the entrepreneurial process. Indeed, the experience of a first or several creation (s) of company (s) allows the entrepreneur not to repeat the same mistakes, to be faster in solving problems that meeting entrepreneurs who have already had business experience to acquire new skills and greater ability to process information through cognitive resources accumulated during the past entrepreneurial experience. We therefore believe that the entrepreneurial past experiences influence *how* entrepreneurs identify business opportunities.

We have not validated the fact that whether associative experiences of Tunisian entrepreneurs have an impact on entrepreneurial opportunity identification. However, these associative associations have had, in some cases, an impact on the desirability of establishing a business for Tunisian entrepreneurs.

It appears from this discussion that prior knowledge and past experiences in our sample of Tunisian entrepreneurs have an impact on business opportunity identification process but at different levels. Indeed, some issues remain unresolved and further research should be conducted to understand the impact of these variables on entrepreneurial opportunity identification process. Should we, indeed, through support of entrepreneurs pushing them to seek information that is related to what they already know to increase their chances of identifying entrepreneurial opportunities or, conversely, should we encourage them to discover other areas they do not know to identify new opportunities people in the area have not yet identified.

Bibliography

Busenitz, W.L., Page West III, G., Shepherd, Dean., Nelson, T. Chandler, G.N., Zacharakis, A. (2003). "Entrepreneurship Research in Emergence: Past Trends and Future Directions," *Journal of Management*, 29, 3, 285-308.

Bygrave, D. William, and Hoffer C.W. (1991), "Theorising about Entrepreneurship," *Entrepreneurship Theory and Practice*, 16, 2, 13-22.

Chelly, Amine. (2006). *Les processus de génération d'opportunités entrepreneuriales: une étude exploratoire auprès d'entrepreneurs tunisiens*, Thèse de Doctorat ès Sciences de Gestion, Université du SUD Toulon-Var.

- Chirstensen, P.J. and Peterson, R. (1990). "Opportunity Identification: Mapping the Sources of New Venture Ideas," *Frontiers of Entrepreneurship Research*, 567-581.
- Churchill, N.C. and Muzyka, D.F. (1994). "Defining and Conceptualizing Entrepreneurship: a Process Approach", In: *Marketing and Entrepreneurship*, Edited by G. E. Hills, Westport, CT: Quorum books, 11-23.
- Cooper, A.C. (1981), "Strategic Management: New Ventures and Small Business", *Long Range Planning*, 14 (5), 39-45.
- De Koning, Alice. and Muzyka, D. (1996). "The Convergence of Good Ideas, When and How Do Entrepreneurial Managers Recognize Innovative Business Ideas?" *Frontiers of Entrepreneurship Research*.
- Dimov, P. D. (2003). "The Nexus of Individual and Opportunity: Opportunity Recognition as a Learning Process", *Frontiers of Entrepreneurship Research*.
- Gaglio, M. Connie, (1997). "Opportunity identification: review, critique and suggested research directions", In: *Advances in Entrepreneurship, Firm Emergence and Growth*, vol. 3, 139-202.
- Granovetter, S., Mark (1973). "The Strength of Weak Ties", *American Journal of Sociology*, 78 (6), 1360-1380.
- Hayek, F. (1945). "The Use of Knowledge in Society", *American Economic Review*, 35 (4), 519-530.
- Huybens, N., Bonami, M. and Durbruille, P. (1993). "La formation d'adultes insérés dans un contexte professionnel: évaluation de l'efficacité pédagogique organisationnelle", *Revue Gestion 2000*, 6, 173-198.
- Kaish, S. and Gilad, B. (1991). "Characteristics of Opportunities Search of Entrepreneurs versus Executives: Sources, Interests, General, Alertness," *Journal of Business Venturing*, 6 (1), 45-61
- Kirzner, M., Israel (1979). *Perception, Opportunity and Profit*, Chicago: University of Chicago Press.
- Kirzner, M. Israel (1997). "Entrepreneurial Discovery and the Competitive Market Process: an Austrian Approach," *Journal of Economic Literature*, March, 35, 1, 60-85.
- Manimala, M.J. (1992). "Entrepreneurial Heuristics: a Comparison of High PI and Low PI Ventures", *Journal of Business Venturing*, 7, 6, 477-504.
- Miles, M.B. and Huberman, M.A. (2003). *Analyse des données qualitatives*, 2^e Ed., DeBoeck, Paris.
- Minniti M. and Bygrave, W.B. (2001). "A Dynamic Model of Entrepreneurial Learning," *Entrepreneurship Theory and Practice*, 25, 3, 5-16.
- Ray, D.M. (1991). "International Opportunity Identification in Small Canadian Exporting Firms", *Frontiers of Entrepreneurship Research*.
- Ronstadt, R.C. (1988). "The Corridor Principle", *Journal of Business Venturing*, 3, 1, 31-40.
- Shane, Scott. (2000). "Prior Knowledge and the Discovery of Entrepreneurial Opportunities", *Organization Science*, 11, 4, 448-469.
- Shane, Scott. (2003). *A General Theory of Entrepreneurship, the Individual Opportunity Nexus*, Edward Elgar Publishing Limited, Glensanda House, 315p.

- Shane, Scott. and Venkataraman, Sankaran. (2000). "The Promise of Entrepreneurship as a Field of Research", *Academy of Management Review*, 25, 1, 217-226.
- Shepherd, D.A., Detienne, D.R. (2005). "Prior Knowledge, Potential Financial Reward, and Opportunity Identification", *Entrepreneurship Theory and Practice*, January, 91-102.
- Timmons, J.A. (1994). *New Venture Creation: Entrepreneurship for the 21st Century*, 4th Edition, Burr Ridge, IL, Irwin.
- Timmons, J.A. and Muzyka, D.F. (1994), "Opportunity Recognition: Lessons from Venture Capital", In : *Marketing and Entrepreneurship : Research Ideas and Opportunities*, G.E. Hills (Ed.), 95-114, Westport, Connecticut, Quorum Books.
- Timmons, J. A., Muzyka, D.F., Stevenson, H.H. and Bygrave, W.D. (1987). "Opportunity Recognition: the Core of Entrepreneurship", *Frontiers of Entrepreneurship Research*, 109-137.
- Ucbasaran, D., Westhead, Paul, Wright, M and Binks, M. (2003). "Does Entrepreneurial Experience Influence Opportunity Identification?" *The Journal of Private Equity*, Winter, 7-14.
- Venkataraman, Sankaran, (1997). "The Distinctive Domain of Entrepreneurship Research", In: *Advances in Entrepreneurship, Firm Emergence and Growth*, vol. 3, edited by J. Katz and R. Brockhaus, Greenwich: JAI Press, 119-138.
- Vesper, K.H. (1991). "Venture Idea Discovery Mental Sequences," *Frontiers of Entrepreneurship research*.
- Von Hippel, Eric (1988). *The Sources of Innovation*, New York, US: Oxford University Press.
- Von Hippel, Eric (1994). "'Sticky Information" and the Locus of Problem Solving. Implications for Innovation", *Management Science*, 40, 4, 429-439.
- Woo, C.Y., Folta, T. and Cooper, A.C. (1992). "Entrepreneurial Search: Alternative Theories of Behavior", *Frontiers of Entrepreneurship Research*, 31-45.
- Yu, T. F. (2001). "Entrepreneurial Alertness and Discovery," *The Review of Austrian Economics*, 14, 1, 47-63.

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**AN EMPIRICAL ANALYSIS OF THE EFFECTS OF GOVERNMENT
CORPORATION DESIGNATION PROGRAMS: FOCUSING ON THE
WORKERS SHORTAGE IN SMALL AND MEDIUM ENTERPRISES IN
KOREA**

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Korean small and medium sized enterprises (SMEs) play a pivotal role in the national economy accounting for 49.4 percent of production. Such SMEs, however, have very insufficient research and development (R&D) activities. The Korean government has introduced various support measures to mitigate the indolence, and various corporate designation programs were actively utilized. This study analyzed the effectiveness of the programs focusing particularly on the skills demand and the shortages in technology workers. Based on a recently held survey among 562 SMEs, our study found that the designated companies experience lesser vacancies and the skill mismatch is a significant determinant of the problem.

Keywords: SMEs, R&D, Policy effect, Skill demand, Treatment Effect model

I. Introduction

Korean small and medium enterprises (SMEs) play a pivotal role in the national economy, accounting for 99.9 percent of all enterprises (3 million SMEs), 87.5 percent of all employees (10.8 million employees), and 49.4 percent of production. Such SMEs, however, have very insufficient research and development (R&D) activities. In particular, only 18.4 percent of the total R&D investments are made by those SMEs and only 26.9 percent of the

total human resources participating in R&D activities are utilized in the SMEs. In addition, the SMEs that carry out R&D activities make up only 24 percent of the total (Ministry of Education, Science, and Technology 2007).

Many previous studies pointed out the shortage of research funds as well as the lack of researchers as the causes of the poor R&D activities of the SMEs in Korea. To solve this problem, the Korean government has introduced various support measures to stimulate the R&D activities. Among these, the strategy of appointing the most competitive among them as technology-innovative SMEs ('Inno-Biz'), venture firms, or management-innovative businesses is considered effective. There is a dearth of studies, however, on the effect of such corporate designation programs. In particular, hardly any studies have been conducted on whether such programs indeed mitigates the aforementioned shortage of workers, which have been pointed out as the largest problem in the improvement of such firms' competitiveness.

This study analyzed the effectiveness of the government's corporate designation programs, based on a recently held survey among 562 SMEs in Korea. In particular, it focused on the effects of such corporate designation system on the skills demanded by the companies, and on its relevance to the workers shortage. Towards the aforementioned end, the shortage in SMEs was based the literatures on skill shortages (Burgess 1992; Haskel and Martin 1993 & 2001; Green and Owens 2003; Marchante, Ortega, and Pagan 2006; Park and Um 2008). This study analyzed the effectiveness of the programs focusing particularly on the skills demand and the shortages in technology workers. Empirically we build on treatment effects literatures (Heckman and Robb 1985; Heckman, LaLonde, and Smith 1999; Abbring and Heckman 2006; and Heckman and Vytlacil 2006a, b). In particular, under the assumption of the selection in the corporate designation process, the treatment effect model attempts to measure the difference in outcomes for a SME from being designated and not being designated.

The rest of the paper is organized as follows. In Section 2 we provide an overview of the corporate designation programs we evaluate. We explain the data with some summary statistics and a priori observations of the data in Section 3 are followed by statistical assumptions, identification, and estimation in Section 4. In Section 5 we present estimates of treatment effects and our estimate of the return on the designation program, exploring also their sensitivity to various sets of explanatory variables. Conclusions and possible directions of further research are in Section 6.

II. Government in Designation Programs on Innovative SMEs in Korea

Innovation is getting more attention and the national growth engine of Korea, which has been available for knowledge based economy, is getting more pressure to be changed. Among the request of the engine changes, one of the most important things is to promote the innovative SMEs instead of Chaebul. The innovative SMEs designates those which obtain excellent results by, in general, ‘innovation’ or constantly pursues innovation. They obtain a high value-added technology, productivity, profitability, and the technical innovation compared to the general SMEs.

Many researches on innovation type SMEs have been done and our government has tried to promote innovative SMEs by providing custom promotion policies. There is no legalized definition of innovative SMEs. However, the government includes venture enterprises, Inno-Biz¹, and MAINBIZ² into innovative SMEs.

In the end of May 2008, the number of innovative SMEs is 27,294(except for overlapping venture enterprises and Inno-Biz) accounting for 8.3 percent out of total SMEs(330,000 except micro-firms). Table 1 shows the number of innovative SMEs

¹ Inno-Biz is a compound word of 'Innovation' and 'Business' which represents a Small and Medium Business fully equipped with competitive technology innovation supported by superior technology.

accelerates to be increased especially after establishing the support policy for SMEs in June 2005³.

² MAINBIZ defines as management innovation business. Management innovation included to organization innovation and marketing innovation

³ The increasing number of Inno-Biz enterprises is caused by introducing all sorts of support systems and supporting the potential SMEs with technologically competitiveness.

Table 1. The Present Status of Innovative SMEs in Korea by Year

(Unit : company)

Year	'98□'00	2001	2002	2003	2004	2005	2006	2007	2008. 5.
Venture	15,774	11,392	8,778	7,702	7,967	9,732	12,218	14,015	14,236
Inno-Biz	-	1,090	1,856	2,375	2,762	3,454	7,183	11,526	12,881
MAINBIZ	-	-	-	-	-	-	2,619	6,510	8,083
Total	15,774	12,482	10,634	10,077	10,729	13,186	22,020	32,051	35,199
Overlap	0	699	1,134	1,519	1,890	2,455	4,508	7,332	7,905
Total(except for overlapping)	15,774	11,783	9,500	8,558	8,839	10,731	17,512	24,719	27,294

Note) Inno-Biz Certification started at 2001, Management-Innovative business Certification at 2006.

Source) SMBA (2008)

In this paper, the venture and inno-biz enterprises are analyzed among innovative SMEs. As shown in the above Table 1, many are overlapped in venture and inno-biz enterprises. And venture and inno-biz enterprises are thriving in R&D investment compared to MAINBIZ and general SMEs (as showed Table 2). This suggests that venture and inno-biz enterprises are ahead in innovative activity such as preoccupying the technologies and imitating existing technologies in diverse industries.

Table 2. Comparison of business performance between innovative and general SMEs

(Unit : percent)

Year	Type	Ratio of debt to net capital	Ratio of operating profits to sales	Ratio of R&D investment to sales
2001	Venture	132.3	3.5	2.2
	Inno-Biz	152.5	5.6	1.6
	general	179.8	4.5	1.1
2006	Venture	128.3	3.7	2.6
	Inno-Biz	145.6	4.7	2.3
	general	158.3	4.0	0.9

Source) The Yearbook of Korea Firm Data

III. Data and Variables

For the empirical analysis, this study is based on the industrial R&D centers DB of Korea Industrial Technology Associate (KOITA). KOITA is certified the establishment of the industrial R&D centers in Korea. Among the industrial R&D centers DB, the total number of R&D centers of SMEs is 17,482 as of December 2008. Of those SMEs, we selected randomly from the list considering as industrial classification and employees. The empirical data collected from 506 SMEs (as showed Table 3). The significance level of sample is 90 percent, standard error 3.57 percent.

Table 3. Sample Distribution by Industry and employees

(Unit : company)

employees Industry	Total		5-19		20-49		50-99		100-299	
	population	sample	population	sample	population	sample	population	sample	population	sample
Total	17,482	506	7,248	127	5,635	143	2,583	103	2,016	133
Food	309	35	102	8	93	8	49	9	65	10
Textile	265	40	52	6	86	13	60	12	67	9
Chemical	1,816	41	680	7	570	11	292	10	274	13
Mechanics	2,881	39	980	4	1,004	12	484	9	413	14
Steel	544	55	135	8	190	11	126	14	93	22
Bio-Science	304	36	201	11	60	12	22	8	21	5
Material	444	36	180	7	131	14	69	3	64	12
Electronics	6,337	58	2,789	8	1,978	16	902	14	668	20
Environment	349	48	234	31	81	13	21	4	13	0
Data-processing	1,590	43	876	14	477	16	175	4	62	9
Construction	1,698	48	653	11	665	10	235	15	145	12
Others	945	27	366	12	300	7	148	1	131	7

Table 4. Variables and Summary Statistics

Variable	Definition	Obs. Number	Mean	Standard. Deviation	Min	Max
destype2	Dummy for type of innovative firm (if innovative SMEs, then 1)	506	0.61	0.49	0	1
sqc2_f	Shortage rate of workers	506	0.09	0.17	0	1.5
lnqc1_f	Log value of EMP	506	3.76	1.05	0.69	5.66
region	Dummy for region (if the metropolitan area, then 1)	506	0.52	0.50	0	1
qa1_2	firm's growth stage	506	3.10	0.93	1	5
prbpart	main customers	506	0.47	0.50	0	1
pcout	the sales per person	506	326.25	841.88	1.93	13333.32
qa2_2	Ratio R&D investment to sales (percent)	484	7.55	10.21	0	70
qa2_3	Ratio E&T investment to sales (percent)	480	1.30	2.47	0	20
busdur	the year of establishment	506	15.68	11.43	2	61
qb1	cluster of technology level	506	1.89	0.60	1	3
ind	dummy for industry	506	6.55	3.30	1	12
rqc1_ab cd	Ratio of researcher and production employees to total technology workforce	506	0.68	0.22	0.02	1
rqc1_ab	Ratio of researcher to total technology workforce	506	0.23	0.23	0	1
techdef	Dummy for technology workforce (if researcher, then 1)	506	0.50	0.50	0	1
rqc1_36	Ratio of Ph.D. to technology workforce	506	0.04	0.09	0	0.75
aage	average age of technology workforce	506	35.74	4.47	25	52.50
aedu	average education period of technology workforce	506	15.80	1.43	12	21.50
rqc3_f	turnover rate of technology workforce	476	0.20	0.23	0	1
qc1_f	firm size	506	69.53	64.85	2	286
outcont	type of performance management system	506	1.28	1.20	0	3
ipmng	type of human resource management system	506	1.01	0.86	0	2
jobst	average satisfaction level of work	506	3.85	0.76	1	9
prefer	the preference of supplement of the personnel	500	0.71	0.46	0	1
relate	the link between a major and a job	502	0.94	0.23	0	1
loexp	Dummy for reconstruction (if yes, then 1)	503	0.19	0.39	0	1
comp	Dummy for compensation system based performance (if yes, then 1)	506	0.28	0.45	0	1
profit	Ratio profitability to the average industry	506	0.33	0.47	0	1
rgrowth	Ratio growth rate to the average industry	506	0.37	0.48	0	1
newprod	Ratio innovation to the average industry	505	0.43	0.50	0	1
pful	Ratio recruitment for talents to the average industry	506	0.27	0.44	0	1
royalty	Ration commitment of job to the average industry	506	0.42	0.49	0	1
techsup	Dummy for use of technology workforce supporting system (if yes, then 1)	506	0.22	0.42	0	1
retire	Dummy for use of the retired technology workforce (if yes, then 1)	506	0.19	0.39	0	1
coop	Dummy for collaboration with universities or institutes (if yes, then 1)	506	0.50	0.50	0	1

To estimate empirical model, we were considered the type of innovative firm as dependent variable and the various explanatory variables; characteristics of a firm, external factors and the level of skill. Above all, the characteristics of a firm are typical explanatory variables that number of employees, location (region), growth stage, and the year of establishment. And the sales per person, ratio of technology workforce, and ratio of Ph.D are used as explanatory variables representing the labor demand of a firm. Instead of the labor supply of a firm used turnover rate of technology workforce. Ratio R&D investment to sales, ratio education and Development (E&D) investment to sales, and technology level are used as explanatory variables representing the skill demand of a firm. The performance management system composed 4 types – Value, Growth, Profit, and Decline. These types were drawn from firm competitiveness compared to average industry. And the human resource management system was divided to 3 types – Cost minimizing, Inducement, and Investment type. Dependent variables and explanatory variables that make up the estimation equation are explained with basic statistics in Table 4.

IV. Empirical Model

In this section we explore the determinants of workers shortages and designation decision using our establishment-level micro survey data. Like all cross-sectional studies, our results may be affected by a host of establishment-specific factors. Also, assuming that the rest of the regression model is correctly specified we may adopt the treatment effect exogenously to control for selectivity. In other words, those who receive the treatment (that is, designation) may differ systematically from those who do not receive the treatment in terms of their observable characteristics, so that confounding factors are non-randomly distributed over the treated and controlled firms. These confounding factors may themselves be related to the firm's characteristics. For example, those with high technology capability may be more

affluent in the treated group than those without the virtue. Also selection of the empirical model should take account of the endogeneity of this binary treatment variable because the individual firm chooses treatment based on the expected benefits from their choice.

Suppose that the propensity of small- and medium-size establishment i to have high workers shortage can be expressed as:

$$y_i = \beta' x_i + \delta d_i + e_i \quad (1)$$

where y_i refers to the shortage rate of small and medium-size establishment i ; x_i is a vector of explanatory variables, β' is a vector of parameters to be estimated, d_i is a dummy variable indicating whether or not the individual firm chooses treatment (participation to government's designation programs), and e_i is an error term.

Clearly, the standard OLS coefficient on the dummy variable in equation (1) will be biased. Following the traditional literature on treatment effects; let d_i be the binary treatment variable and assume the potential outcomes depend on the treatment decision (Greene 1993):

$$d_i^* = \gamma' w_i + u_i \quad (2)$$

where a binary treatment indicator $d_i = 1$ means treatment and $d_i = 0$ otherwise.

A potential applicant decides whether to take the treatment or not based on the expected gain. The gain consists of the difference between the expected difference in outcomes and the appliance costs, which are affected both by observable applicant characteristics w_i and a shock u_i , which is correlated with e_i . Also, here we do not observe d_i^* for a given establishment. Instead we observe d_i . We also measure a vector of firms' characteristics w_i , which are not affected by treatment.

Assuming that (e_i, u_i) is distributed according to the bivariate normal distribution with $[0,0,1,\sigma_e,\rho]$, we have:

$$E[y_i | C_i = 1] = \beta' x_i + \delta + E[e_i | d_i = 1] = \beta' x_i + \delta + \rho \sigma_e \lambda(\gamma' w_i) \quad (3)$$

where $\lambda(\gamma'w_i)$ is the inverse Mill's ratio, and the designation has an increasing impact of the dependent variable of our interest if δ is positive.

Furthermore, based on such analysis as Haskel and Martin (1993, 2001), Marchante, Ortega, and Pagan (2006), and Park and Um (2008), this study posits that the workers shortage can be explained by five categories of determinants – general characteristics of an individual firms, internal factors (explanatory variables that could affect a firm's labor demand), external factors (for example, region and industry), skill demand factors, and participation to government's designation programs, that is, treatment.

Empirically, we estimate this treatment-effects model using full maximum likelihood. Also, we estimate a general model that includes most significant measures of the above mentioned determinants. This model is then expanded by adding our measures of a firm's resource management scheme and internal personnel management system.

V. Treatment Effects and the Determinants of Shortage Rate

Table 5 presents the results for the treatment-effects model estimated by FIML. The upper part of the table contains the factors that might influence the severity of unfilled positions (shortage equation). The lower part corresponds to the selection equation expressed as equation (2) in the previous section. Also estimated coefficients and standard errors are presented for each separate regression. The results indicate that the correlation coefficient between the error terms of the selection equation and the structural equation is significantly different from zero. The Tobit and OLS regression reported in the first and second column of the table reflects the strong selection bias exists.⁴

⁴ First, we perform an OLS and a Tobit regression given in equation (1) and the estimation result is shown in Table 5. The policy effect is statistically unclear; the coefficient associated with designation is insignificant. This coefficient may be biased due to the selectivity problem, as mentioned above.

By the FIML estimation model, of which the result is shown in the third and fourth columns of Table 5, the effect of program participation is significantly negative (all $p\text{-value} < 0.01$), implying that the designation reduces the workers shortage. In fact, the designation variable – a dummy variable indicating the individual SME chooses to participate to government designation programs - significantly reduces shortage rate. Also, according to the findings, the most important determinants are firm size (QC1_F) and turnover rate (RQC3_F). Among those, magniloquence in firm size significantly raises the labor shortage, and it was higher when a firm experienced some high turnovers during the prior three years. Also, three skill demand variables (QA2_2, QB1, RQC1_36) out of four such variables introduced in the model are significant from zero (all $p\text{-value} < 0.10$ at least). The coefficients on the sector dummies indicate that the probability that firms have unfilled positions is higher in electric and electronics as well as data processing sectors. Conversely, construction engineering sector experiences relatively lesser shortages than in the remaining sectors.

Regarding the determinants of the designation, the most important determinants are firm size, technology level, percent of R&D investment to total sales, and the regional location. Participation to the designation programs are negated with increasing firm size. High R&D intensity and technological level (if self-evaluated technology characteristic of the firm is high-tech oriented) has a positive effect. Conversely, locating in the provinces (when a firm is not located in the Capital region) yields a lower tendency of participation. Sectoral dummies are not a major determinant except for electric and electronics sector and construction engineering sector.

Note that R&D intensity (QA2_2), the ratio of Ph.D. holders to total employees (RQC1_36), and turnover rate (RQC3_F) are significant in the structural equation but not in the second stage equation and could therefore be used as the identifying variables for the

shortage equation. Also, we employ X_i in Equation (1) except for four labor demand/turnover variables⁵ as a set of independent variables in the selection mechanism.

Separate regressions for the high/med-tech enterprises and the low-tech based samples indicate that the impact of treatment is only pronounced in the former case. Here, turnover rate(RQC3_F) and percent ratio of Ph.D. holders to total employees (RQC1_36) are significant for both subsamples. Furthermore, the estimation results for the high/med-tech samples are quite similar to the full sample results. The last column of Table 5 offers the estimates for another two explanatory variables OUTCONT (resource management scheme) and IPMNG (internal personnel management). However, both categorical variables discussed a bit extensively for its derivation in footnotes are found insignificant. Additional explanatory variables summarized in Table 4 including JOBST, PREFER, LOEXP, RTTURN, COMP, PROFIT, RGROWTH, NEWPROD are not significant, and the estimate results for those variables are not reported in Table 5.

Table 5. Estimation Results

	Tobit Regression		OLS Regression		Treatment-effect FIML(I)		Treatment-effect FIML(II)	
	Coefficient	Standard Error	Coefficient	Standard Error	Coefficient	Standard Error	Coefficient	Standard Error
Shortage Equation (Dependent Variable: Worker Shortage Rate)								
lnqc1_f	-0.077***	0.012	-0.059***	0.008	-0.074***	0.009	-0.071***	0.009
region	-0.006	0.020	-0.007	0.014	0.006	0.015	0.011	0.015
_Iqa1_2_2	-0.048	0.088	-0.034	0.060	-0.050	0.068	-0.059	0.068
_Iqa1_2_3	-0.055	0.089	-0.056	0.060	-0.067	0.069	-0.079	0.068
_Iqa1_2_4	-0.082	0.090	-0.064	0.061	-0.090	0.069	-0.101	0.069
_Iqa1_2_5	-0.086	0.097	-0.073	0.066	-0.097	0.075	-0.104	0.074
prbpart	0.032	0.020	0.019	0.013	0.017	0.013	0.014	0.013
pcout	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
qa2_2	0.003*	0.001	0.002*	0.001	0.002*	0.001	0.002	0.001
qa2_3	-0.005	0.004	-0.002	0.003	-0.002	0.003	-0.002	0.003
busdur	0.001	0.001	0.001	0.001	0.000	0.001	0.001	0.001

⁵ These four variables are primary business partner, average age of workers, average education years of workers, and average turnover rates.

_Iqb1_2	-0.020	0.025	-0.007	0.017	-0.037	0.020	-0.038	0.020
_Iqb1_3	-0.110**	0.040	-0.050*	0.026	-0.133***	0.030	-0.130***	0.029
_Iind_2	0.007	0.052	0.002	0.034	-0.019	0.039	-0.009	0.039
_Iind_3	-0.057	0.055	-0.013	0.035	-0.044	0.040	-0.032	0.040
_Iind_4	-0.014	0.054	-0.013	0.035	-0.002	0.040	0.011	0.040
_Iind_5	0.000	0.049	0.003	0.032	0.021	0.036	0.029	0.036
_Iind_6	0.055	0.054	0.056	0.036	0.060	0.041	0.045	0.041
_Iind_7	-0.056	0.055	-0.033	0.036	-0.031	0.041	-0.023	0.041
_Iind_8	0.039	0.049	0.028	0.032	0.058	0.037	0.068	0.037
_Iind_9	0.010	0.050	0.003	0.034	0.009	0.038	0.017	0.038
_Iind_10	0.058	0.052	0.054	0.035	0.072	0.040	0.089*	0.040
_Iind_11	-0.041	0.053	-0.028	0.034	-0.080*	0.039	-0.072	0.038
_Iind_12	-0.026	0.056	-0.020	0.037	-0.066	0.043	-0.056	0.043
rqc1_abcd	0.080	0.050	0.049	0.032	0.039	0.030	0.033	0.030
techdef	-0.030	0.022	-0.021	0.015	-0.008	0.017	-0.008	0.016
rqc1_3456	0.021	0.040	0.045	0.026	0.022	0.030	0.278	0.095
aage	-0.002	0.002	-0.001	0.002	-0.001	0.001	-0.002	0.001
aedu	-0.008	0.007	-0.003	0.005	-0.004	0.004	-0.004	0.004
rqc3_f	0.188***	0.043	0.147***	0.030	0.146***	0.028	0.137***	0.028
outcont							-0.003	0.005
ipmng							0.006	0.008
destype2	0.029	0.023	-0.004	0.015	-0.201***	0.021	-0.203***	0.021
_cons	0.443*	0.199	0.343**	0.132	0.621***	0.133	0.629***	0.132

Selection Equation (Dependent Variable: Participation to Governmental Designation Programs)

qc1_f					-0.005***	0.001	-0.005***	0.001
_Iqa1_2_2					-0.125	0.521	-0.178	0.520
_Iqa1_2_3					-0.027	0.524	-0.073	0.525
_Iqa1_2_4					-0.290	0.529	-0.336	0.529
_Iqa1_2_5					-0.308	0.572	-0.357	0.572
pcout					0.000	0.000	0.000	0.000
qa2_2					0.005	0.008	0.004	0.008
qa2_3					0.009	0.028	0.010	0.028
busdur					-0.002	0.007	-0.001	0.007
_Iqb1_2					-0.517**	0.168	-0.512**	0.168
_Iqb1_3					-1.171***	0.245	-1.147***	0.245
rqc1_ab					-0.359	0.359	-0.419	0.362
techdef					0.102	0.140	0.086	0.133
rqc1_3456					-0.026	0.247	0.886	0.776
_Iind_2					-0.220	0.321	-0.178	0.321
_Iind_3					-0.362	0.329	-0.331	0.332
_Iind_4					0.138	0.332	0.180	0.333
_Iind_5					0.275	0.306	0.311	0.308
_Iind_6					-0.057	0.344	-0.096	0.354
_Iind_7					0.003	0.341	0.026	0.344
_Iind_8					0.403	0.312	0.448	0.315
_Iind_9					0.128	0.327	0.132	0.327

_lind_10	0.529	0.348	0.597	0.353
_lind_11	-0.755*	0.336	-0.737*	0.338
_lind_12	-0.483	0.349	-0.443	0.351
region	0.216	0.125	0.231	0.125
_cons	1.204	0.622	1.183	0.618
/athrho	1.025***	0.105	1.030***	0.104
/lnsigma	-1.838***	0.045	-1.845***	0.044
LR test (Chi-square)	31.83	0.000	28.94	0.000

* $p < .05$; ** $p < .01$; *** $p < .001$

VI. Conclusion

A plenty of researches on management conditions and R&D activities of SMEs showed that one of the major difficulties that they are dealing with in management is recruitment of workers and retaining them (SMBA 2007; MOCIE and KOTEF 2007). As mentioned in the above discussion, the Korean Government developed and adopted diverse measures to support them with that problem (Kim and Park 2009; Park and Um 2008). One of them is the SMEs Designation Program that competitive SMEs are designated as venture and inno-biz enterprises. It is the most commonly used program but there has been questions concerning its effectiveness.

In particular, there has not been any research conducted regarding its effects on the workers shortage problem which is the one of the most difficult obstacles for SMEs in management. There have been only presumptions that the government and some experts see that this program will help improve the competitiveness or management conditions of businesses and ultimately facilitate the supplement of the personnel or reduce the turnover. However, some experts see that this designation programs do not have significant impact on

improving the competitiveness of enterprises, accordingly, will not have such impact on mitigating the workers shortage problem.⁶

In order to investigate this issue, some of the designation programs for SMEs with high technological competitive edge were selected in this study for analysis of their effects on the workers shortage problem which was based on the new research results on SMEs. The treatment-effects model was applied for analysis on the assumption that there will be essential difference in characteristics between designated enterprises and non-designated ones.

This paper showed that the designation programs selected in this study are considerably significant explanatory variables in easing the workers shortage problem of enterprises. According to the Tobit regression analysis on the treatment effect regression and shortage equation, it is clear that there is a strong selection bias between designated enterprises and non-designated enterprises. That is, there is a strong tendency that designated SMEs are relatively smaller in size compared to non-designated SMEs, show a high technological level and are located in the Metropolitan area. They are also normally the firms in the knowledge-intensive service industry such as information processing and construction engineering.

Workers shortage of SMEs can be explained, as mentioned above, with the variables of the fact whether it is designated or not, size, proportion of R&D expenses to sales, technological level, proportion of technical personnel with a doctor's degree, turnover of technical personnel and so on. It showed that designated SMEs or large businesses have a less problem of workers shortage; on the other hand it was more severe in the firms with a large

⁶ In this study, we judge that even if designation programs will not strengthen the technological competitiveness of businesses in a short period, however they will help improve the image of enterprises for the job seekers in the labor market or will enable the enterprises to invest in education or training in a long term or encourage them to invest in

proportion of R&D expenses to sales, firms with a high-skilled workforce structure with large proportion of technical human capital with a doctor's degree, and obviously firms with high turnover rate.

In short, the designation programs in this study are supporting relatively smaller-sized and technology-intensive businesses and are contributing to relieve the workers shortage problem of the designated enterprises.

In conclusion, the results of this paper have following implications. The designation programs need to be operated continuously, at least for the purpose of security of human capital. These programs need to be operated mainly for the SMEs with high competitive edge and need to be reinforced continuously in the future that they can have constant effects on those SMEs. Moreover, there needs to be more careful analysis of the effects of these programs on technological competitiveness, sales and growth of designated SMEs. In terms of popularity of designation programs and the fact that they are relatively convenient programs with high potential to expand in the future, there needs to be more in-depth study on the effects of these programs.

REFERENCES

- Acemoglu, D. (2002). "Technical Change, Inequality and the Labor Market," *Journal of Economic Literature*, 40 (1), 7-72.
- Bosworth, D.L., R. Davies, T. Hogarth, R.A. Wilson and J. Shury (2000). *Employer Skills Survey 1999: Statistical Report*, Department for Education and Skills, DfEE Publications: Nottingham.
- Burgess, S. (1992). "A Search Model with Job Changing Costs: Euro sclerosis and Unemployment," *Oxford Economic Papers*, 44 (1), 75-89.

education or training that they will ultimately relieve the workers shortage problem or help

- Clarke, L. and G. Herrmann (2007). "Skill Shortages, Recruitment and Retention in the House Building Sector," *Personnel Review*, 36, 509-527.
- Green, F. (1998). "The Meaning and Determinants of Skills Shortages," *Oxford Bulletin of Economics and Statistics*, 60, 165-187.
- Green, F. and D. Owens (2001). *Skills, Local Areas and Unemployment*. Department for Education and Skills, DfEE Publications: Nottingham.
- Green, F. and D. Owens (2003). "Skill Shortages: Local Perspectives from England," *Regional Studies*, 37, 123-134.
- Greene, William H. (1993). *Econometric Analysis*. New York, New York: Macmillan Publishing Company.
- Hart, P. and E. Shipman (1990). "Skills Shortages in the United Kingdom: The Lessons from Case Studies," Discussion Paper No. 185, National Institute of Economics and Social Research.
- Hetze, P. (2006). *Skill Shortages, Labor Reallocation, and Growth*. Working Paper No. 59, Institut für Volkswirtschaftslehre: Universität Rostock.
- Haskel, J. and C. Martin (1993). "The Causes of Skill Shortage in Britain," *Oxford Economic Papers*, 45, 573-588.
- Haskel, J. and C. Martin (2001). "Technology, Wages, and skills shortages: Evidence from UK micro data," *Oxford Economic Papers*, 55, 642-658.
- Hepworth, M., A. Jones, K. Oakley and G. Spencer (2001). *The Geography of the Knowledge Economy in Britain*. Local Futures Group: London.
- Hogarth, T., J. Shury, D. Vivian and R. Wilson (2001). *Employer Skills Survey 2001: Statistical Report*. Department for Education and Skills, DfEE Publications: Nottingham.

them with effectively retaining workers.

Kim, S. and Park, J. (2009). "Determinants of unbalance between supply and demand of the technology workforce," *The Korean Association of Small Business Studies*, 2009 Proceeding.

Korean National Statistical Office (2000). *Korean Standard Occupational Categorization*. Korean National Statistical Office.

Learning and Skills Council (2006), *National Employers Skills Survey 2005: Main Report*. Learning and Skills Council National Office.

Nissim, J. (1984). "The Price Responsiveness of the Demand for Labor by Skill: British Mechanical Engineering: 1963-1978," *Economic Journal*, 94, 812-825.

Marchante, A.J., B. Ortega, and R. Pagan (2006). "Determinants of Skills Shortages and Hard-to-fill Vacancies in the Hospitality Sector," *Tourism Management*, 27, 791-802.

Ministry of Labor (each year). *A Survey of Labor Demand*. Ministry of Labor.

Ministry of Commerce, Industry and Energy (2006). *2005 Report on the Technology Workforce Demand Survey*. Ministry of Commerce, Industry and Energy.

Mortensen D. (1986). "Job Search and Labor Market Analysis," in *Handbook of Labor Economics*. Ed. O. Ashenfelter, and R. Layard, Amsterdam: North-Holland.

Park, J. and Um, M. (2007). "Determinants of Labor Shortages in Korean Manufacturing Sectors: Focusing on Engineering and Technology Workforce," *International Association for Management of Technology*, IAMOT 2008 Proceeding.

Small and Medium Business Administration (each year). *A Survey of Labor in Small and Medium Businesses*. Small and Medium Business Administration.

Wallis, G. (2002). *The Effect of Skill Shortages on Unemployment and Real Wage Growth: A Simultaneous Equation Approach*. Working Paper.

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Eco-efficiency and Consulting Programs for Sustainable Business Activities

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This paper examines the features and effectiveness of an eco-efficiency improvement measures, MFCA and PIUS-Check through a case study of PIUS-Check implementations in Tokai region in Japan. It aims to draw implications for eco-efficiency diffusion policy measures to SMEs. Six PIUS-Check cases have been implemented in the Tokai region since 2006. Attempts to employ it as the policy measure of regional economic development with an emphasis on the implication to the environmental issue exist.

The lessons learned from the case study include that a combination of a simplified tool and consulting service are essential for diffusion of the concept and application of eco-efficiency. The role of consultants is the key factor to foster eco-efficiency to SMES in the case of PIUS-Check. Assurance of high quality consultants is essential for the success of the programs.

Track: 3. Entrepreneurship and Public Policy

A Study on the Cost of Business Failure of Entrepreneurs and Entrepreneurial Intention

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The main purpose of this paper was to figure out the relationship between the costs of entrepreneur's business failure and entrepreneurial intention. According to the research, majority of Korean businessmen were seriously worrying about their business failure. In the event of the business failure they could lose not only their invested money but also they could take other various burdens such as joint liability on guarantee, private debts and various financial difficulties. They are also seriously worrying about losing non-financial costs such career loss, reputation loss, social and family hardship. According to the research financial and non-financial costs give entrepreneurs serious stress. Eventually the stress affect negatively to the entrepreneurial intention. Therefore, to encourage entrepreneurial intention, various actions to ease entrepreneurial stress are necessary.

Track: 3. Entrepreneurship and Public Policy

The Effect of Perception and Usage of Export Support Programs on Export Performance in Korean Local SMEs

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There are various export support programs(ESPs) in Korea to promote the export of small and medium enterprises(SMEs) by the central or local governments, and the export promotion agencies such SBC, KOTRA, KITA, etc. However, since such programs are not widely known, most of the Korean SMEs cannot enjoy the benefit of them. Also, some of those programs do not consider the needs or the characteristics of the export development stages(EDS) of Korean SMEs.

Thus, we analyzed the present level of perception and utilization of ESP, and the relationship among the perception level, the utilization level and the export performance of the SMEs. Specifically, based on the assumption that SMEs in different EDS would require different types of ESPs, we made an empirical test whether there were differences in the perception or the utilization of the ESP in the EDS of SMEs.

Track: 3. Entrepreneurship and Public Policy

The Effect of Exploration and Exploitation on Company Performance: the Mediating Role of Organizational Learning

by Charlotta A. Sirén and Marko Kohtamäki

This article studies the effect of exploration and exploitation on company performance and in particular, the mediating role of organizational learning. The study applies quantitative data, drawn from the analysis of 160 small or medium sized software companies. The findings show that while exploitation has a direct relationship to company performance, organizational learning partially mediates the relationships between exploration, exploitation and performance. These results suggest that organizational learning has an important role in transforming the effects of exploration and exploitation into company performance.

Introduction

In today's competitive environment, the survival of an organization can be attributed to two main factors, the ability of the organization to continuously explore and identify new product and service opportunities, and its ability to exploit its existing resources. Organizations able to implement both incremental and revolutionary change are called ambidextrous organizations (Tushman et al. 1996; Birkinshaw and Gibson 2004). Earlier studies have shown that to pursue exploration and exploitation require substantially different, structures, processes, strategies, capabilities and even business cultures. In addition, exploration and exploitation have different impacts on an

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organization's adaptability and performance (He and Wong 2004). Moreover, the dynamics of knowledge acquisition and learning processes related to the two orientations of exploration and exploitation are dissimilar (Kauppila 2007; Lubatkin et al. 2006) and so are treated as separate mechanisms in this article.

Although exploration and exploitation have been found to have positive effects on an organization's performance (He and Wong 2004; Gibson and Birkinshaw 2004; Lubatkin et al. 2006), some other scholars present contradictory results, including that opportunity exploration has no direct positive effect on company performance (March 1991). One reason for these inconsistent findings is that organizations differ in terms of their ability to assimilate new knowledge from outside or inside the organization, and that merely acquiring knowledge is not simply enough to create long-term success (Nonaka et al. 1995). This suggests that there is a factor that mediates the relationship between exploration, exploitation and company performance. Following on from some prior studies, researchers here suggest that organizational learning mediates these relationships (Garvin 1993; Li et al. 2008; Nonaka 1995) particularly in highly exploratory projects aiming to generate new explorative innovations. In these projects, organizations rely on organizational learning to transfer new information to shared organizational understanding and change an organization's behavior accordingly (Lubatkin et al. 2006; Nonaka 1994; McGrath 2001; Raisch and Birkinshaw 2008). In contrast, in the case of exploitative innovations, the new knowledge created resembles the organization's present knowledge structure, and is thus easier to adopt. Therefore the role of organizational learning as a mediating factor is less important with exploitative than with explorative innovations (Li et al. 2008). On the whole, earlier

studies have shown that, compared with exploitative actions, explorative actions need more knowledge and learning to succeed (Kauppila 2007). Consequently, organizational learning can be expected to have an important influence on the relationship between exploratory actions and organizational performance. To conclude, better understanding of how firms learn and engage in explorative or exploitative activities in view of improved performance is needed.

This paper is divided into six sections. First, a review of the literature is provided to specify the domain of organizational learning. The second section presents the conceptual paradigm for operationalizing and understanding organizational learning. In the third, the procedures for generating the scale items are discussed, and the fourth outlines the data collection process. The fifth section presents the results of the analysis and the paper concludes with a discussion of the empirical findings about the mediating role of the organizational learning between exploration and exploitation activities and performance.

Theory Development and Hypotheses

Organizational Learning

The organization's ability to learn has been claimed to be an important, and indeed in some accounts to be a unique, source of organization's sustainable competitive advantage (Levinthal and March 1993; Senge 1990). This notion about the strategic role of organizational learning as a basis for an organization's competitive advantage has changed the field of strategic management (Levinthal and March 1993; Jerez-Gómez et al. 2005). That is to say, the organization's ability to learn has become a key factor in an organization's long term survival (Levinthal and March 1993). Although the phe-

nomenon of organizational learning has been widely accepted, and its positive effects noted, it is nearly impossible to attribute its genesis to a single theorist (Templeton et al. 2002). In the context of strategic management, organizational learning can be traced back to the work of Cyert and March (1963) who discuss about learning as an organizational phenomenon (Templeton et al. 2002). Although organizational learning has its roots in individual learning, the process that leads to organizational learning is not as simple as just adding together the learning of an organization's different members (Jerez-Gómez et al. 2005; Hedberg 1981). Therefore, organizational learning is more than the cumulative result of the learning acquired by its individual members (Hedberg 1981).

Prior scholars argue that organizational learning is a dynamic process where knowledge moves from the individual to the group and finally to an organizational level and back again (Bontis et al. 2002; Huber 1991; Crossan et al. 1999). In other words, organizational learning has a collective nature. This process starts with knowledge acquisition and continues on to a knowledge sharing and integration phase among individuals and groups. As a consequence of the earlier actions, new collective organizational knowledge is created (Hedberg 1981). This new collective knowledge is then stored in the organizational memory (Levitt and March 1988) and affects the information that is acquired, interpreted and shared in the future.

Organizational learning has been popularized through the work of Senge (1990). The perspective Senge has adopted presumes that learning as a collective activity only takes place under certain conditions. In addition, organizational learning doesn't occur through random chance, but through the development and use of specific skills. The normative perspective emphasizes the role of the management and deliberate interven-

tions to establish necessary internal conditions for organizational learning (DiBella 1995; Goh et al. 1997). Besides Senge, several scholars (Garvin 1993; Yang, Watkins and Marsick 2004; DiBella 1995) have adopted this normative perspective as a basic for defining organizational learning. The normative perspective also best describes the orientation of this research, that is, organizational learning is a collective activity that takes place under certain conditions. As a consequence, organizations need to create conditions that foster experimentation, learning from their own experiences, from others and also from knowledge transfer (Garvin 1993; DiBella 1995; Goh et al. 1997).

Establishing the Concept of Organizational Learning

Although research on organizational learning has been growing over the last 30 years and has even accelerated in the past years (Crossan et al. 1999; Bontis et al. 2002), there is still a diverse set of definitions of organizational learning. To conclude, the organizational learning research lacks consensus on a clear definition and the basic nature of organizational learning. The multiple and diverse definitions differ for example by their requirements for organizational learning (Garvin 1993; Bontis et al. 2002). Some scholars (e.g. Huber 1991) insist that behavioral change is required for learning to occur, while others (e.g. Friedlander 1983) think that cognitive changes are sufficient.

The following divergent definitions outline the main aspects in the literature of organizational learning. Argyris and Schön (1978) define organizational learning as a process of detecting and correcting errors. On the contrary, Senge (1990) defines learning organizations as organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspirations are set free and where people are continually learning how to learn together. Slater and Narver (1995) conclude that, at its most basic

level, organizational learning is the development of new knowledge or insights that have the potential to influence behavior.

This study adopts the definition of organizational learning proposed by Garvin (1993). According to Garvin's (1993 p.80) definition, a learning organization is an organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights. From an organizational perspective, this requires an active management and enabling structures in order to ensure that learning occurs by design rather than by chance (Adler and Borys 1997; DiBella 1995; Goh and Richards 1997; Garvin 1993). According to Garvin (1993), an organization should create systems and processes that support systematic problem solving, experimentation, learning from its own and others experience and transferring knowledge throughout the organization to enable organizational learning.

Organizational Learning Dimensions

Earlier organizational learning literature has identified and measured the essential organizational characteristics necessary to promote organizational learning (Goh and Richards 1997; Hult and Ferrell 1997, Jerez-Gómez et al. 2005). The dimensions used in this study have been developed based on organizational learning literature and have been statistically validated in earlier studies. The underlying organizational learning dimensions are experimentation, learning from experience and knowledge sharing. These three underlying dimensions sum up the facilitating factors for organizational learning proposed by Garvin (1993).

Experimentation. Experimentation is the most supported dimension in the literature of organizational learning (Chiva et al. 2007; Senge 1990; Garvin 1993; Goh, and Richards 1997; Hedberg 1981). According to Hedberg (1981) this is because learning results

from the adaptive and manipulative interactions between an organization, its environment and experimental actions are important, as organizations rarely master their environments to the extent that they develop lasting optimal responses. Chiva et al. (2007) define experimentation as the degree to which new ideas and suggestions are attended to and dealt with sympathetically. According to Goh and Richards (1997) experimentation is the degree of freedom employees enjoy in the pursuit of new ways of getting the job done and the freedom to take risks. Garvin (1993) adds to earlier definitions by suggesting that experimentation involves the systematic search for and testing of new knowledge and that experimentation is usually motivated by opportunity and expanding horizons, not by current difficulties.

As a rule, organizations are not very experimental because they try to avoid uncertainty (Hedberg 1981; March 1991). Therefore, organizations need to create a culture that promotes creativity and the readiness to take controlled risks, supporting the idea that one can learn from one's mistakes (Jerez-Gòmez et al. 2005; Slocum et al. 1994; Slater and Narver 1995; Naman and Slevin 1993). In short, the organization's structure and systems should support experimentation (Goh and Richards 1997; Hedberg 1981).

Learning from Experience. Most research on organizational experience is consistent with behavioral learning theory, which argues that organizations learn from experience (Rerup 2005; Greve 2003; Cyert and March 1963; March and Simon, 1958). In other words, organizational learning depends not only on investment efforts, but also on previously accumulated knowledge or experience (absorptive capacity) (López et al. 2005). Levitt and March (1988) see organizations as learning by encoding inferences from history into routines that guide behavior. In this history-dependent view, past experience is the main source of organizational learning. Furthermore, repetition of the same task will

improve the organization's overall performance. The organization's experience is drawn from explicit and tacit routines, programs, standard operating procedures and other organizational rules, and these rules change over time as a result of experimental learning (Holmqvist 2003). Other scholars have also emphasized experience in their definitions of organizational learning. Cavaleri and Fearon (1996) for example state, that organizational learning is the purposeful creation of shared meaning derived from the common experiences of people in organizations.

Levitt and March (1988) have also pointed out that learning from an organization's own experiences is not enough. Consequently, learning organizations should be skilled both in learning from their own experience and from the experience and best practice of others (Garvin 1993; Levitt and March 1998). Moreover, perhaps organizations shouldn't look to learn only from successes, because as some scholars (for example Starbuck et al. 2007) have emphasized, firms learn more by overcoming problems than experiencing successes. According to Garvin (1993) organizations should learn from both successes and failures, review them systematically, and record the lessons learned in a form that employees find accessible. Therefore learning organizations should also be capable of interpreting experiences and storing those lessons of history in their organizational memory so that the lesson learned will be accessible to organizational members who have not personally experienced the history (Levitt and March 1988).

Knowledge Sharing. The starting point for organizational knowledge creation is the individual's personal knowledge that has to be elucidated, shared and constructed in order to develop organizational knowledge that is valuable for the company as a whole. Dissemination of personal knowledge is one of the central activities of the knowledge-creating company (Nonaka 1995). A number of studies identifies knowledge sharing

and transfer as an important dimension of organizational learning (Jerez-Gómez et al. 2002; Garvin 1993; Goh and Richards 1997; Huber 1991; Nonaka 1994; Tippins et al. 2003).

Knowledge sharing implies the internal spreading of knowledge, acquired at an individual level through conversations and interactions between individuals, through to the organizational level (Jerez-Gómez et al. 2005; Nicolini and Mezner 1995). Knowledge can be shared between the individuals and units by using formal and informal channels for example formal or informal meetings, reports, education and training (Tippins et al. 2003; Garvin 1993). Knowledge sharing rests on the previous existence of absorptive capacity implying a lack of internal barriers that hinder the knowledge sharing within the firm (Cohen and Levinthal 1990; Jerez-Gómez et al. 2005).

Opportunity Exploration and Resource Exploitation

Researchers have found that opportunity exploration and resource exploitation are two contradictory processes and constructs (Lubatkin 2006). Birkinshaw and Gibson (2004) associate opportunity exploration with adaptability, that is an organization's ability to move quickly toward new opportunities and to adjust to volatile markets. Moreover, other scholars have found that exploration is not only adaptation but it drives latent environmental trends by creating innovative technologies and new markets (Lubatkin et al. 2006). On the contrary, resource exploitation is associated with alignment (Birkinshaw and Gibson 2004) that is a clear sense of how value is created in the short term and how activities should be coordinated and arranged to deliver that value. Exploitative firms successfully exploit the value of their present resources, rolling out existing business models quickly and taking costs out of existing operations (Birkinshaw and Gibson 2004).

Despite the importance of the phenomena, empirical tests of the impacts of resource exploitation and opportunity exploration on company performance remain scarce (He and Wong 2004; Gibson and Birkinshaw 2004; Lubatkin et al. 2006). Some previous studies have shown that both resource exploitation and opportunity exploration have positive impacts on company performance (Gibson and Birkinshaw 2004; He and Wong 2004; Lubatkin et al. 2006). On the other hand, some earlier studies have found contradictory results, for example that opportunity exploration has no direct effect on company performance (March 1991) or that the effect is not always significant or monotonic (Atuahene-Gima and Murray 2007). In conclusion, there is still little direct evidence of the positive effect of exploration and exploitation on company performance. Therefore, more empirical knowledge is needed on their direct effect on company performance.

Exploration is extremely important to organizations because only a limited number of new ideas may be created using existing knowledge (Tsai et al. 2008). Exploration enhances a firm's performance by increasing its members' ability to add new variants of knowledge to their knowledge repertoire (Atuahene-Gima and Murray 2007; March 1991). Consequently, exploration produces fresh ideas which can be used to differentiate an organization's product or technology from its competitor's offerings (Katila and Ahuja 2002). In this way, an organization may potentially find innovative ways of serving the markets. In other words, continuous exploration of new markets and technologies challenge the organization's mental models, thereby possibly resulting in innovative products with the potential to enhance the firm's performance (Atuahene-Gima and Murray 2007).

Thus H_{1a}: The greater the extent of exploration, the higher the level of organizational performance.

On the contrary, exploitation is a consequence of an organization's need to stretch its limited resources to generate profits (Atuahene-Gima and Murray 2007). According to March (1991), these returns from exploitation can be described as predictable and proximate. The positive effect on performance is a consequence of operational efficiency achieved by engaging in similar activities more efficiently (Auh et al. 2005; Porter 1996). That is to say, exploitative firms gain performance advantages through realizing the advantages of current technological and product-market knowledge and experience. To sum up, exploitation is safe, as the learning curve reduces errors and decreases mistakes, which in turn enhances firm performance.

Thus, H_{1b}: The greater the extent of resource exploitation, the higher the level of organizational performance.

While exploration has been found to have a positive impact on company performance, exploration has also been found to positively affect organizational learning (Wang 2008; Slater et al. 1995). This is because of the characteristics of exploration. Exploration implies that an organization's behavior is characterized by search, discovery, experimentation, risk-taking and innovation (March 1991). For instance, risk tolerance and innovativeness have been found to have a positive effect on organizational learning by eliminating hierarchical organizational structures that inhibit collaborative organizational learning (Wang 2008; Fiol and Lyles 1985). Furthermore, this flexible structure

enhances learning by encouraging organization-wide communication and knowledge transfer (Wang 2008). Search, discovery and experimentation have also been found to have positive effects on organizational learning by bringing new, external information from the markets to the organization (Lubatkin et al. 2006). This environmental scanning provides an impulse for acquisition and dissemination of new knowledge that is an important starting point for organizational learning (Wang 2008). However, according to Wang (2008) new information affects firm performance only in organizations capable of evaluating the potential value of the acquired information to the firm and to using the information to achieve the common organizational goals (Slater et al. 1995). To sum up, exploration broadens a firm's scope for organizational learning by bringing new information to the organization. Given the previous discussion, it is hypothesized that:

H_{2a}: The greater the extent of exploration, the higher the level of organizational learning.

On the contrary, exploitation implies an organization's behavior characterized by refinement, implementation, efficiency, production and selection (March 1991). Earlier studies also suggest that exploitation has a positive effect on organizational learning (e.g. March 1991; Holmqvist 2004). This is because exploitation creates reliability in an organization's experience through refinement and extension of existing competences, technologies, and paradigms (Holmqvist 2004). Furthermore, this improved reliability of organizational experience enhances an organization's learning competence (Holmqvist 2004). In other words, an organization becomes better at things it does repeatedly. On the other hand, exploitation

affects organizational learning through the clarity and speed of its outcomes. For instance, March (1991) has found that the certainty, speed, proximity, and clarity of feedback ties exploitation to its consequences quickly and precisely, and furthermore, that this makes learning from experience easier. To sum up, exploitation is expected to have a direct positive effect on organizational learning.

Thus, H_{2b}: The greater the extent of resource exploitation, the higher the level of organizational learning.

Earlier studies have strongly suggested that organizational learning increases an organization's performance (Levinthal and March 1993). This is because organizational learning is about development of new knowledge that facilitates behavioral changes in the organization (Garvin 1993). More precisely, it is through these behavioral changes that organizational learning enhances firm performance (Slater and Narver 1995). Furthermore, according to the knowledge-based view, knowledge can be seen as an intangible resource that is difficult for competitors to imitate and can thus provide a foundation for superior performance (Grant 1996; Tsai et al. 2008). In addition, scholars see organizational learning as a means of generating capability that is valued by customers, and is thus difficult for rivals to imitate, and therefore bestows competitive advantage (Slater and Narver 1995). For these reasons, organizational learning is the main determinant of the differences in performance among organizations.

Thus, H₃: The higher the level of organizational learning, the higher the level of organizational performance.

The Mediating Role of Organizational Learning

Given the characteristics of organizational learning this study presumes that organizational learning strengthens the effect of exploration and exploitation on an organization's performance due to the organization's ability to incorporate and use information and to change its behavior accordingly. Exploration concentrates on the pursuit of new knowledge aimed at innovation (Levinthal and March 1993; Tsai et al. 2008) while exploitation of the information discovered is closely related to the use of existing knowledge to support the alignment of existing resources (Atuahene-Gima and Murray 2007; Birkinshaw and Gibson 2004). Nevertheless, simply creating new knowledge through exploration and exploitation will not be enough to enhance an organization's performance (Nonaka 1995).

Organizational learning is a mechanism that incorporates new knowledge gained from explorative or exploitative actions into shared organizational knowledge that has the potential to change an organization's behavior accordingly. In other words, organizational learning creates a mechanism which affects the realization of perceived opportunities and existing recourses.

Organizational learning plays a particularly important mediating role between exploratory innovations and company performance. This results from the nature of exploratory knowledge; that it is novel, complex and ambiguous (Atuahene-Gima and Murray 2007; McGrath 2001). Utilization of explorative knowledge, requires a high learning capability to interpret and utilize unfamiliar information effectively, and to overcome potential deficiencies in internal competence, to develop novel innovations (Baker and Sinkula 2007; Li et al. 2008). Through the process of organizational learning exploratory knowledge moves from individual and group level to organizational level

resulting changes to structure, systems, products and procedures (Crossan and Berdrow 2003). In other words, in the case of exploration, organizational learning will serve as a mechanism through which new business opportunities are transformed into new innovative products and services.

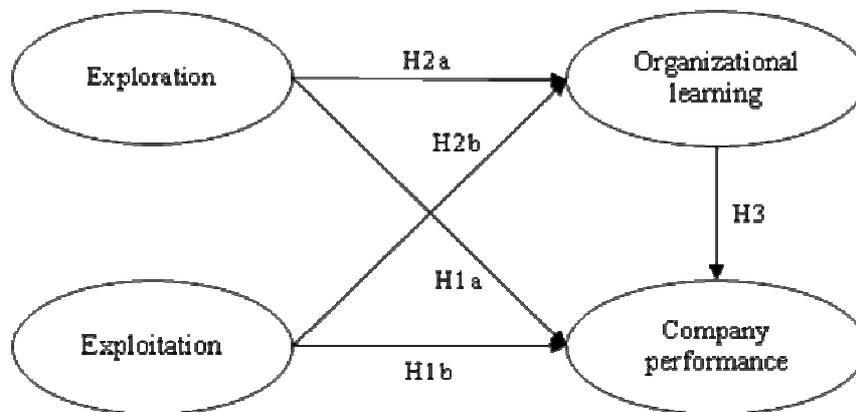
Thus, H_{4a}: Organizational learning will mediate the relationship between opportunity exploration and performance

To reap the benefits of its current resources, an organization needs to be committed to continuous development of its resources and capability. However, the development of an organization's current resources depends on the mechanisms of organizational learning that share the developmental information, institutionalizes the new knowledge created and commits it to memory in the form of organizational processes, strategies, systems and structures (Crossan and Berdrow 2003). That is, organizational learning provides an organizational level of process of institutionalization that has the characteristic to engage the whole organization in a shared interpretation of information that enables consensus on the meaning of the information, and its absorption into organizational memory (Sinkula 1994; Slater and Narver 1995; Crossan and Berdrow 2003). Institutionalized learning enables exploitation as exploitation requires well-defined and routine actions to occur (Crossan and Berdrow 2003). In brief, organizational level learning forms a store of knowledge from where material for exploitation can be acquired (Crossan and Berdrow 2003). Thus, in this study we argue that organizational learning may also

facilitate the relationship between resource exploitation and company performance.

Thus, H_{4b}: Organizational learning will mediate the relationship between exploitation and performance

Figure 1
Research Model



Research Method and Data

Data Collection, Response Pattern and Respondents

The present study analyses the mediating role of organizational learning in small and medium sized software companies. The data fits the analysis well, as the dynamic software industry demands of companies that they learn and adapt quickly to environmental changes.

Sampling was restricted to the software industry. The sample was drawn from the Business Register, which is maintained by a government agency called Statistics Finland. Statistics Finland maintains national official statistics, which include the busi-

ness register of all Finnish businesses that are liable to pay value added tax. The sampling frame included all software companies with over five employees — amounting to 1283 enterprises. We received 174 responses from the total population of 1283 software firms, of which 14 were excluded because the questionnaires were incomplete or the companies did not belong to the target group of small and medium sized software companies. Data collection resulted in a final sample size of 160 and response rate of 12 percent.

Utilizing a key respondent approach, data was collected from company managing directors. The average size of the respondent companies measured by average annual turnover was ca. 3.6m euro. On average the respondent firms have ca. 765 customers each, but their single largest customer typically represents 27 percent of the total revenue. Hence, many of these companies are somewhat dependent on their most important customer.

Methods and Data Analysis

The present study applies a partial-least-squares (PLS) approach to analyze the relationships between the independent and dependent variables. This is because the model tests an explorative model with somewhat alternative hypothesis such whether exploration and exploration has a direct impact on company performance or their impact is mediated by organizational learning. This study applies the software package SmartPLS 2.0 (Ringle, Wende, and Will 2005).

Small datasets can be analyzed with PLS, because the PLS approach requires ten times the number of constructs, which have an effect on the dependent variable that has the largest number of explanatory constructs in the studied research model. In this study, as the performance is explained with two latent variables, the hypothesized model

can be estimated with $n \geq 20$. Therefore, the dataset of 164 is adequate to conduct the analysis.

Measures

This study uses measures based on previous studies. The relevant items are reported in Table 1. They are measured on a Likert-scale (1=fully disagree, 5=fully agree). Thus instead of objective facts, the items measure respondents' perceptions. Our research model consists of four reflective constructs (exploration, exploitation, organizational learning and company performance).

The study measures opportunity exploration as a reflective construct. As exploration is defined as striving to seek new business opportunities, items measure investments in new business ideas, creation of innovative products and services and whether a company looks for opportunities through creative thinking. The items were developed on the basis of He and Wong (2004; See also Kuckertz, Kohtamäki and Körber 2009; Jansen *et al.* 2006).

Resource exploitation is defined as the development of a company's current resources and capabilities. Exploitation is measured on three items; the urge to develop the quality of the company's current products and services, and the overall quality of procedures and the company's current customer relationships. Items were developed on the basis of He and Wong (2004; See also Kuckertz *et al.* 2009; Jansen *et al.* 2006).

In the present study, we measure organizational learning with four items; encouragement to learn from experiences (Greve 2003), encouragement to create new knowledge and ideas, tolerance of mistakes when testing new ideas (Goh and Richards 1997) and encouragement to share knowledge (Slater and Narver 1995).

Company performance is measured by five Likert-scale variables, which measure the owners' satisfaction with company's performance, ability to satisfy customers, overall performance, profitability and growth in comparison to its competitors. The measures for this reflective construct are adapted from previous studies (Gibson and Birkinshaw 2004; Wolff and Pett 2006).

Data Analysis and Results

Construct Validation

This study applies a PLS –model to test the validity of constructs too. This is in order to develop the measurement models. Multiple criteria such as Cronbach's alpha and composite reliability, test the construct reliability. Convergent validity is analyzed by using average variance extracted (AVE). The typical threshold value for Cronbach's alpha is .7, for composite reliability .7 and for AVE .5 (Chin 1998; Cool, Dierickx, and Jemison 1989). We also evaluated the item loadings. All the constructs achieve highly satisfactory Cronbach's alpha values, composite reliability values and AVE values. All the constructs achieve the typical threshold values.

Table 1
Means, Standard Deviations (SD), Loadings of the Reflective Constructs and Path
Coefficients of the Formative Constructs

Constructs and Items (All Measured on 5-point Likert-scales)	Mean	SD	Path coefficient / Load- ing
<i>Exploration</i> (α : .72; CR: .84)			
Our company actively strives to find new business ideas by thinking differently	3.81	.87	.80***
Our company creates new and innovative products and services	3.66	1.02	.78***
Our company invests in new business ideas	3.18	1.13	.82***
<i>Exploitation</i> (α : .70; CR: .82)			
Our company continuously strives to improve the quality of its services and products	4.07	.67	.78***
Our company focuses on improving quality	3.65	.87	.67***
Our company strives to develop its current customer relationships	4.27	.76	.86***
<i>Organizational learning</i> (α : .81; CR: .88)			
Our employees are encouraged to learn from their experiences	4.19	.74	.78***
Our employees are encouraged to share information actively	4.35	.76	.82***
Management and staff is encouraged to share their thoughts, goals and ideas	4.08	.81	.85***
We value trying new ideas so much that we tolerate a few failures	4.00	.93	.75***
<i>Performance</i> (α : .70; CR: .82)			
The owners of the business are satisfied with its performance.	3.38	1.03	.86***
Our company does a good job of keeping our customers satisfied.	4.13	.73	.67***
Our company performance is excellent in comparison to our competitors	3.56	.87	.73***
The business has grown rapidly compared to competitors.	3.26	1.08	.80***
The business is very profitable compared to competitors.	2.93	1.21	.54***
*** $p \leq 0.001$ ** $p \leq 0.01$ * $p \leq 0.05$ † $p \leq 0.1$ (one-sided test)			

The researcher also decided to analyze both item and construct discriminant validity. In the construct level consideration researchers found AVE value for each construct exceeding its squared latent variable correlation (Table 2), which suggests satisfactory

construct discriminant validity (Chin 1998; Cool, Dierickx, and Jemison 1989). Also item discriminant validity seems satisfactory since all items load at their highest with their respective construct, none of the items load higher on other than its intended construct and all the item loadings are significant. In addition, almost all the items' loadings are above .67 which can be considered satisfactory (Chin 1998). Only one of the loadings is below the threshold, but that is probably due to the fact that the items measure different dimensions of performance that do not necessarily correlate. Overall, the evaluation of the reflective measurement models reveals that all constructs are of satisfactory reliability and validity.

Researchers also checked the data for common method variance, by using Harman's (1976) one factor test. The test was conducted by using principal axis factoring. According to Podsakoff and Organ (1986) common method variance is not a problem if items load on multiple factors and one factor does not account for most of covariance. Factor analysis with our 15 items resulted in four factors with *eigenvalues* greater than 1 (KMO = 0.76), which explain 63 percent of the variance among the items, while the first factor accounted for 30 percent of the variance. Hence, it seems that common method variance is not present in the data.

Table 2 presents correlations between the given constructs and shows that the highest correlation between the independent variables (exploration, exploitation and organizational learning) is .38, which is fairly satisfactory due to multicollinearity (< .9). Multicollinearity was also tested using a VIF-index. A typical threshold value for the VIF-index is 10, and in this study the value for each independent variable is below 1.3. Thus, observations suggest that that constructs are very satisfactory in respect of multicollinearity.

Table 2
Construct Discriminant Validity – Squared Latent Variable Correlations (Off-diagonal Elements) Versus Average Variance Extracted (AVE) (Bold Diagonal Elements)

	Exploration	Exploitation	Organizational Learning	Company Performance
Exploration	.64			
Exploitation	.36**	.60		
Organizational learning	.38**	.24**	.64	
Company performance	.19*	.29**	.38**	.54

** . Correlation is significant at the 0,01 level (2-tailed)

The Structural Model

Figure 2 reports the PLS estimates, which are estimated by the path-weighting scheme. The structural model was estimated by utilizing the path-weighting scheme and an iterative estimation process (Chin 1998). The study applies a standard bootstrapping procedure (Yung and Bentler 1996) with 500 re-samples, which consists of the same number of cases as in the original sample (160), in order to determine the significance of each path between independent and dependent variables.

The PLS analysis results in a high explanatory power for the independent variables. The R^2 value for organizational learning is .18 and for performance .21. The Q^2 value associating with the Stone-Geisser-Criterion is higher than zero for all the dependent variables, which indicates that the model fulfills the prerequisites of predictive relevance (Chin 1998).

Figure 2
Results of the Partial Least Squares Analysis

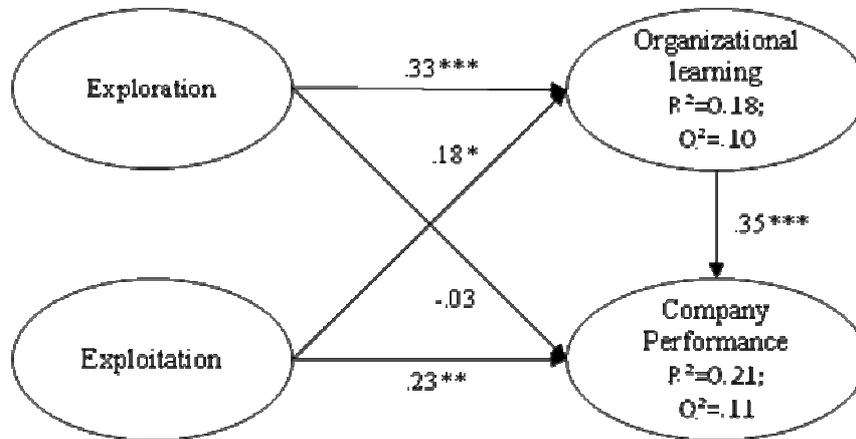


Figure 2 presents the results of the structural model analysis. The results show that opportunity exploration does not directly explain company performance ($-.03$; *n.s.*), but resource exploitation does ($.23$; $p < 0.01$). Thus, the model shows no support for hypothesis 1a, but does provide support for 1b. The path model also shows that both exploration ($.33$; $p < 0.001$) and exploitation ($.18$; $p < 0.05$) impact on organizational learning, while organizational learning ($.35$; $p < 0.001$) also explains company performance in a way that is statistically significant. The model confirms hypothesis 2a and 2b, as well as hypothesis 3.

The model also suggests that organizational learning partially mediates the relationship between exploration, exploitation and company performance since the direct effect of both exploration ($.09$; *n.s.*) and exploitation ($.32$; $p < 0.001$) weakens when organizational learning is entered in the model. Thus, the model shows partial support for hypothesis 4a and 4b.

Discussion and Implications

This study set out to examine the role of organizational learning in the relationship between opportunity exploration, resource exploitation, organizational learning and company performance. This study differs from the earlier studies where exploration and exploitation are considered to be different approaches to learning or different types of learning and learning activities (March 1991) by suggesting that organizational learning is actually a mechanism that capitalizes on opportunity exploration, and resource exploitation.

In the present study, researchers found that the relationship between exploration and company performance is partially mediated by organizational learning. This result suggests that organizations need learning capabilities in order to utilize recognized market opportunities. More specifically, organizations need learning capabilities because knowledge derived from exploration is novel, complex and ambiguous, as organizations lack prior applicable knowledge (Atuahene-Gima and Murray 2007). Thus, organizational learning helps organizations to interpret and use new knowledge effectively and to develop new competencies to better respond to new situations. To sum up, the results of this study suggests that organizational learning forges the missing link between exploration and firm performance.

The study also found that organizational learning partially mediates the relationship between resource exploitation and company performance. The reason for this partial mediation is that knowledge gained from exploitation is closely related to a firm's previous experience and knowledge structure (Atuahene-Gima and Murray 2007). Consequently, the role of organizational learning is smaller when acting between exploitation and performance, as the interpretation of the incrementally developed knowledge is eas-

ier as the new knowledge does not differ remarkably from the previous organizational knowledge. In these situations, knowledge sharing and interpretation and the formation of organizational level knowledge will not be as important as in the case of opportunity exploration. The findings of Kauppila (2007) support the result of this study by highlighting the role of learning objectives in explorative firms.

The results of this study reveal that exploitation does have a direct relationship with company performance, while exploration does not. The earlier study of March (1991) supports these findings as it shows that the returns from exploitation are more certain and proximate than the returns from exploration. The findings of this study also offer empirical support for Atuahene-Gima and Murray's (2007) arguments about the diminishing returns from over-investing in information searches without reaping many of the benefits. The findings of this study show that organizational learning helps firms to take advantage of exploration and therefore it enhances the performance effect of exploration.

Both exploration and exploitation explain organizational learning. The findings suggest that increasing the level of exploration or exploitation increases the level organizational learning. Exploration positively influences organizational learning by encouraging firms to take risks, innovate and to search out new opportunities. Innovative firms encourage people to see unusual and novel solutions and tolerate mistakes (Wang 2008). Moreover, innovation and risk taking encourage organizations to create cross-functional teams that in turn enhance the organization-wide communication that is important for organizational learning. Through search, discovery and experimentation, an organization scans its environment, which in turn provides the impulse for organizational learning (Wang 2008). This study also confirms earlier findings that resource ex-

ploitation positively influences organizational learning (Holmqvist 2004). In brief, the main reason for this finding is that organizations simply become better at things they do repeatedly.

Finally, this study confirms that organizational learning explains company performance. This result supports Levinthal and March's (1993) contention that organizational learning heightens an organization's performance. The previous studies collectively agree that through organizational learning firms generate capabilities that are valuable, rare and difficult to imitate, hence bestowing competitive advantage (Slater and Narver 1995). To conclude, the results of this study support the proposition that exploration and exploitation have positive impacts on organizational learning, that, in turn, are conducive to firm performance.

The study provides insights into why some firms may not be realizing performance benefits from investing in exploration. In particular, the results provide evidence that firms seeking improved performance solely by investing in exploration may not realize the enhanced performance. Consequently, in order to derive performance benefits from exploration, firms must focus their attention on intervening processes such as organizational learning. According to these results, particularly in exploratory projects, managers should invest in developing internal conditions that foster organizational learning. For instance, managers should support experimentation, learning from experience and knowledge transfer in the organization (Garvin 1993). To summarize, the results of this study suggest that managers should focus on processes such as organizational learning that enhance the performance effect of exploration, since through organizational learning the real benefits of exploration can be exploited.

The findings of this paper must be viewed in the light of its bounds and limitations. First, centering the study on the software industry allows the context to be examined in greater detail and it minimizes possible external influence on the performance, however, it may limit the external validity of the study. Therefore, it would be beneficial to test this construct and its applicability further in other industries. Second, the generalizability of this research is limited by its focus on Finnish companies. This is because organizational learning may differ among different nations and cultures (Bontis et al. 2002). Future research would benefit from international data and comparison. Finally, despite the fact that the measurement items used in this study have previously been used and statistically tested in earlier studies, it should be noted that the measurement items of organizational learning can realistically be thought of only as proxies for an underlying latent phenomenon that is itself not fully measurable.

References

- Adler, P. S., and B. Borys (1996). "Two types of bureaucracy: Enabling and coercive," *Administrative Science Quarterly*, 41 (1), 61–89.
- Argyris, C., and D. Schön (1978). *Organizational Learning: A Theory of Action Perspective*. Reading, MA: Addison Wesley.
- Atuahene-Gima, K., and J. Murray (2007). "Exploratory and Exploitative Learning in New Product Development: A Social Capital Perspective on New Technology Ventures in China," *Journal of International Marketing*, 15 (2), 1-29.
- Auh, S., and B. Menguc (2005). "Balancing Exploration and Exploitation: The Moderating Role of Competitive Intensity," *Journal of Business Research*, 58 (12), 1652-1661.
- Baker, W. E., and J. M. Sinkula (2007). "Does Market Orientation Facilitate Balanced Innovation Programs? An Organizational Learning Perspective," *Journal of Product Innovation Management*, 24 (4), 316-334.
- Birkinshaw, J., and C. Gibson (2004). "Building Ambidexterity into an Organization," *MIT Sloan Management Review*, 45 (4), 47-55.
- Bontis, N., M. Crossan, and J. Hulland (2002). "Managing an Organizational Learning System by Aligning Stocks and Flows," *Journal of Management Studies*, 39 (4), 437-469.
- Cavaleri, S., and D. Fearon (1996). *Managing in Organizations that Learn*. Cambridge: Blackwell.
- Chin, W. W. (1998). "The Partial Least Squares Approach to Structural Equation Modeling," in *Modern Methods for Business Research*. Ed. G. A. Mahwah, New Jersey: Laurence Erlbaum Associates, 295-336.
- Chiva, R., J. Alegre, and R. Lapidra (2007). "Measuring Organizational Learning Capability Among the Workforce," *International Journal of Manpower*, 28(3), 224-242.
- Cohen, W., and D. Levinthal (1990). "Absorptive Capacity: a New Perspective on Learning and Innovation," *Administrative Science Quarterly*, 35 (1), 128-152.
- Cool, K., I. Dierickx, and D. Jemison (1989). "Business Strategy, Market Structure and Risk-Return Relationships: A Structural Approach," *Strategic Management Journal*, 10 (6), 507–522.
- Crossan, M. M., H. W. Lane, and R. E. White (1999). "An Organizational Learning Framework: From Intuition to Institution," *Academy of Management Review*, 24 (3), 522-537.
- Crossan, M. M., I. Berdrow (2003). "Organizational Learning and Strategic Renewal," *Strategic Management Journal*, 24 (11), 1087-1105.
- Cyert, R. M., and J. G. March (1963). *A behavioral theory of the firm*. Cambridge, MA: Basil Blackwell.
- DiBella, A. J. (1995). "Developing Learning Organizations: A Matter of Perspective," *Academy of Management Journal*, (Best Papers Proceedings, Special Issue), 287-290.
- Fiol, M. C., and M. A. Lyles (1985). "Organizational Learning," *Academy of Management Review*, 10 (4), 803-813.
- Friedlander, F. (1983). "Patterns of Individual and Organizational Learning," in *The Executive Mind: New Insights on Managerial Thought and Action*. Ed. S. Srivastva and Associates. San Francisco, Calif.: Jossey-Bass, 192–220.

- Garvin, D. A. (1993). "Building a Learning Organization," *Harvard Business Review*, 71 (4), 78-91.
- Gibson, C., and J. Birkinshaw (2004). "The Antecedents, Consequences and Mediating Role of Organizational Ambidexterity," *Academy of Management Journal*, 47 (2), 209-266.
- Goh, S., and G. Richards (1997). "Benchmarking the Learning Capacity of Organizations," *European Management Journal*, 15 (5), 575-583.
- Grant, R. (1996). "Toward a Knowledge-based Theory of the Firm," *Strategic Management Journal*, 17 (Winter Special Issue), 109-122.
- Greve, H. (2003). *Organizational Learning from Performance Feedback*. Cambridge, UK: Cambridge University Press.
- Harman, H. H. (1976). *Modern factor analysis*, 3rd. ed. Chicago, IL: The University of Chicago Press.
- He, Z., and P. Wong (2004). "Exploration vs. Exploitation: An Empirical Test of the Ambidexterity Hypothesis," *Organization Science*, 15 (4), 481-494.
- Hedberg, B. (1981), "How Organizations Learn and Unlearn?," in *Handbook of Organizational Design*. Ed. Nystrom, P.C., Starbuck, W.H.. Oxford, UK: Oxford University Press, 3-27.
- Holmqvist, M. (2003), "A Dynamic Model of Intra- and Interorganizational Learning," *Organization Studies*, 24 (1), 93-121.
- Holmqvist, M. (2004). "Experiential Learning Processes of Exploitation and Exploration Within and Between Organizations: An Empirical Study of Product Development," *Organization Science*, 15 (1), 70-81.
- Huber, G. P. (1991). "Organizational Learning: The Contributing Processes and the Literatures," *Organization Science*, 2 (1), 88-115.
- Hult, G. T., and O. C. Ferrell (1997). "Global Organizational Learning Capacity in Purchasing: Construct and Measurement," *Journal of Business Research*, 40 (2), 97-111.
- Jansen, J.J.P., van den Bosch, F.A.J. and Volberda, H.W. (2006). "Exploratory Innovation, Exploitative Innovation, and Performance: Effects of Organizational Antecedents and Environmental Moderators," *Management Science*, 52, 1661-1674.
- Jerez-Gómez, P., J. Céspedes-Lorente, and R. Valle-Cabrera (2005). "Organizational Learning Capability: a Proposal of Measurement," *Journal of Business Research*, 58 (6), 715-725.
- Katila, R., and G. Ahuja (2002). "Something Old, Something New: a Longitudinal Study of Search Behavior and New Product Introduction," *The Academy of Management Journal*, 45 (6), 1183-1194.
- Kauppila, O-P. (2007). "Towards a Network Model of Ambidexterity," paper presented at the 17th Nordic Workshop on Interorganisational Research, Turku, Finland, August
- Kuckertz, A., M. Kohtamäki & C. Körber (2009). "Why the Fast Eat the Slow – The Impact of Strategy and Innovation Timing on the Success of Technology-Oriented Ventures," *International Journal of Technology Management* (Forthcoming).
- Levinthal, D. A., and J. G. March (1993). "The Myopia of Learning," *Strategic Management Journal*, 14 (4), 95-112.

- Levitt, B., and March, J. G. (1988). "Organizational Learning," *Annual Review of Sociology*, 14 (3), 319-340.
- Li, C., C. Lin, and C. Chu (2008). "The Nature of Market Orientation and the Ambidexterity of innovations," *Management Decision*, 46 (7), 1002-1026.
- López, S.P., J. M. Peón, and C. J Ordás (2005). "Organizational Learning as a Determinant Factor in Business Performance," *The Learning Organization*, 12 (3), 227-245.
- Lubatkin, M. H., Z. Simsek, Y. Ling, and J. F. Veiga (2006). "Ambidexterity and Performance in Small- to Medium-sized Firms: The Pivotal Role of Top Management Behavioral Integration," *Journal of Management*, 32 (5), 646-672.
- March, J. G. (1991). "Exploration and Exploitation in Organizational Learning," *Organization Science*, 2 (1), 71-87.
- March, J. G., and H. Simon (1958). *Organizations*. New York: Wiley.
- McGrath, R. G. (2001). "Exploratory Learning, Innovative Capacity, and Managerial Oversight," *Academy of Management Journal*, 44 (1), 118-131.
- Naman, J. L., and D. P. Slevin (1993). "Entrepreneurship and the Concept of Fit: a Model and Empirical Test," *Strategic Management Journal*, 14 (2), 135-152.
- Nicolini, D., and M. Mezner (1995). "The Social Construction of Organizational Learning: Conceptual and Practical Issues in the Field," *Human Relations*, 48 (7), 727-746.
- Nonaka, I. (1994). "A Dynamic Theory of Organizational Knowledge Creation," *Organizational Science*, 5 (1), 14-37.
- Nonaka, I., and H. Takeuchi (1995). *The Knowledge Creating Company. How Japanese Companies Create the Dynamics of Innovation?* New York: Oxford University Press.
- Podsakoff, P. M., and D. W. Organ (1986). "Self-reports in Organizational Research: Problems and Prospects," *Journal of Management*, 12 (4), 531-544.
- Porter, M. E. (1996). "What is strategy?," *Harvard Business Review*, 74 (6), 61-78.
- Raisch, S., and J. Birkinshaw (2008). "Organizational Ambidexterity: Antecedents, Outcomes, and Moderators," *Journal of Management*, 34 (3), 375-409.
- Rerup, C. (2005). "Learning from Past Experience: Footnotes on Mindfulness and Habitual Entrepreneurship," *Scandinavian Journal of Management*, 21 (4), 451-472.
- Ringle, C., Wende, S. and Will, A. (2005). "Smart-PLS 2.0," University of Hamburg, Hamburg.
- Senge, P. M. (1990). *The Fifth Discipline: The Art and Practice of the Learning Organization*. New York: Doubleday Currency.
- Sinkula, J. M. (1994). "Market Information Processing and Organizational Learning," *Journal of Marketing*, 58 (1), 35-45.
- Slater, S. F., and J. C. Narver (1995). "Market Orientation and the Learning Organization," *Journal of Marketing*, 59 (3), 63-74.
- Slocum, J. W., M. McGill, and D. T. Lei (1994). "The New Learning Strategy: Anytime, Anything, Anywhere," *Organizational Dynamics*, 23 (2), 33-47.
- Starbuck, W. H., M. L. Barnett, and P. Baumard (2007). "Payoffs and Pitfalls of Strategic Learning," *Journal of Economic Behavior and Organization*, 66 (1), 7-21.
- Templeton, G. F., B. L. Lewis, and C. A. Snyder (2002). "Development of a Measure for the Organizational Learning Construct," *Journal of Management Information Systems*, 19 (2), 175-218.

- Tippins, M. J., and S. S. Ravipreet (2003). "It Competency and Firm Performance: Is Organizational learning a Missing Link?," *Strategic Management Journal*, 24 (8), 745-761.
- Tsai, M-T., and Y-C. Huang (2008). "Exploratory Learning and New Product Performance: The Moderating Role of Cognitive Skills and Environmental Uncertainty," *Journal of High Technology Management Research*, 19 (2), 83-93.
- Tushman, M. L., and C. A. O'Reilly (1996). "Ambidextrous Organizations: Managing Evolutionary and Revolutionary Change," *California Management Review*, 38 (4), 8-30.
- Wang, C.L. (2008). "Entrepreneurial Orientation, Learning Orientation and Firm Performance," *Entrepreneurship Theory and Practice*, 32 (4), 635-657.
- Wolff, J., and T. Pett (2006). "Small firm performance: Modeling the role of product improvement and process improvement" 50th Anniversary Special Issue *Journal of Small Business Management*, 44(2), 269-285.
- Yang, B., K. E. Watkins, and V. J. Marsick (2004). "The Construct of the Learning Organization: Dimensions, Measurement, and Validation," *Human Resource Development Quarterly*, 15(1), 31-54.
- Yung, Y.-F., and P. M. Bentler (1996). "Bootstrapping techniques in analysis of mean and covariance structures," in *Advanced Structural Equation Modeling: Issues and Techniques*. Ed. G. A. Marcoulides and R. E. Schumacker. Mahwah, NJ: Lawrence Erlbaum, 125-157.

The Effect of Entrepreneurial Orientation on Firm Performance: Understanding the Process of Entrepreneurial Learning and Knowledge Creation

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Since simply examining the direct entrepreneurial-performance relationship provides an incomplete picture of performance, this paper suggest entrepreneurial learning process that involves exploratory information acquisition, experimentation, exploitative knowledge storage and refinement acts as one of the main mechanisms through which entrepreneurial orientation leads to greater success. we propose an integrated path, beginning with entrepreneurial orientation predicting entrepreneurial learning processes, which in turn predict the knowledge developed, and concluding with overall performance. We test our model on a survey sample of 230 high technology Chinese firms and find broad support for the hypothesized path and the mediating effect of entrepreneurial learning.

Track: 6. Innovation in SMEs

Innovating Business Reporting: XBRL Enabled Social and Environmental Sustainability Reporting

By David H. Gilbert & Heinrich W. Schmidt

This paper reports on a multi-method, multi-discipline, five year research project that aims to develop and test a standardised, digital reporting taxonomy that will reduce future reporting burden for Australian firms and enable aggregation of social and environmental sustainability data at an inter-organisational level. By doing so, Government, regulatory bodies and businesses will be better positioned to make decisions that consider critical issues affecting both nation and communities such as climate change and environmental degradation hence driving more sustainable approaches to business enterprise.

Introduction

The Australian Federal Government's 2012 mandated adoption by business, of eXtensible Business Reporting Language (XBRL), is propelling the digital automation of reporting between enterprises, government and regulatory bodies. However, while financial reporting is the focus of this change, the critical issues of social and environmental sustainability reporting have been overlooked. The research reported on in this paper aims to develop and test a standardised reporting taxonomy that will reduce future reporting burden and enable aggregation of social and environmental sustainability data at an inter-organisational level.

The proposed integrated model of Standardised Business Reporting (SBR) will seamlessly encompass financial, social and environmental accountability performance. By doing so,

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Government, regulatory bodies and businesses will be better positioned to make decisions that consider critical issues affecting both nation and communities such as climate change and environmental degradation hence driving more sustainable approaches to business enterprise. Findings will be combined with novel enterprise visualisation methods in support of trustworthy green reporting and of strategic enterprise decision making.

eXtensible Business Reporting Language (XBRL)

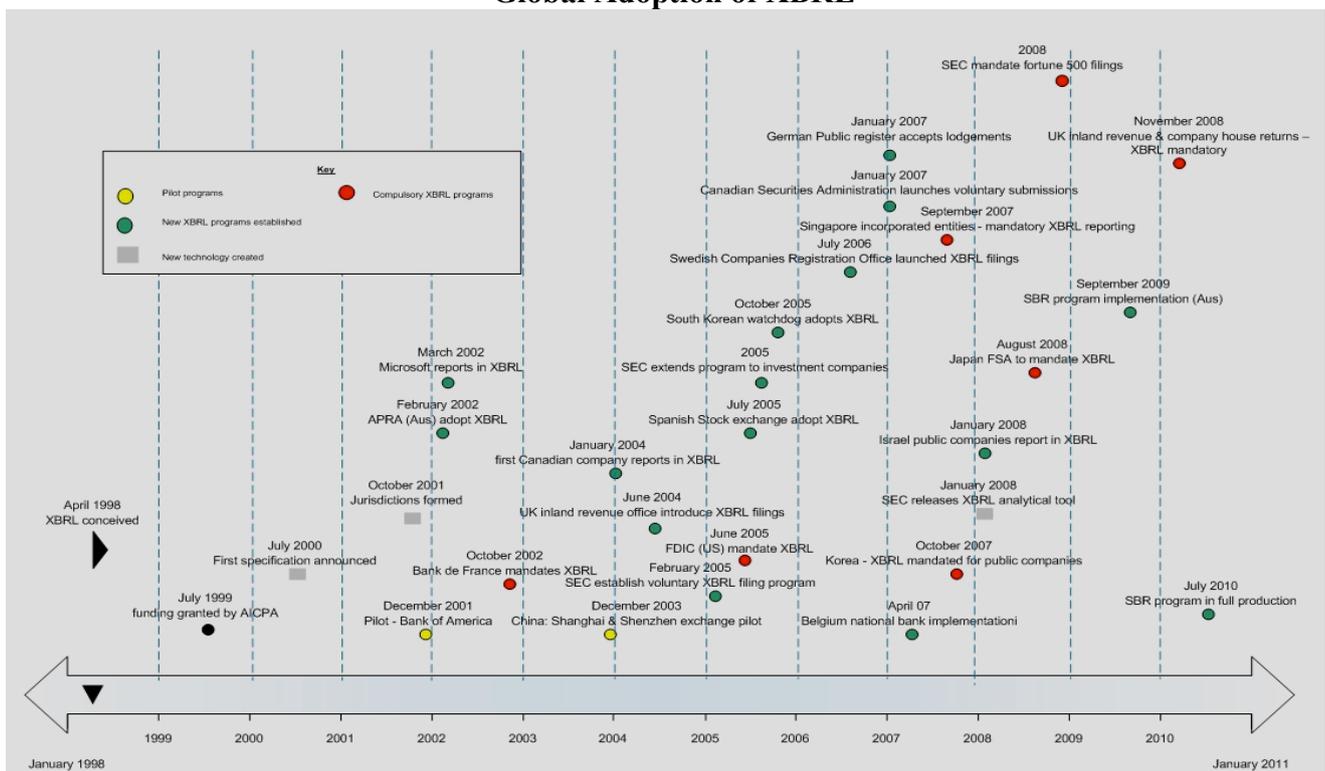
XBRL provides “an XML-based framework that the global business information supply chain can use to create, exchange, and analyse financial reporting information including, but not limited to, regulatory filings such as annual and quarterly financial statements, general ledger information, and audit schedules” (Hoffman & Strand, 2001:11). XML or eXtensible Markup Language was developed in the late 1990s in response to the shortcomings of Hypertext Markup Language (HTML). HTML is able to display information on the internet but users cannot manipulate or interpret web site content. XML in contrast, uses generalised codes to tag data overcoming this issue (Barbour 2004). XBRL which was subsequently developed by the American Institute of Certified Public Accountant’s (AICPA) High Tech Task Force in late 1999, early 2000 was created to enable a uniform global coding standard to be adopted worldwide (Kloeden, 2006). Any hardware or software that is XBRL enabled allows information to be easily displayed and importantly, manipulated by commonly used software packages such as Microsoft Office. By tagging each piece of financial data at its source to a firm’s chart of accounts as well as to international financial standards, the information can be electronically passed between different software systems without qualification. XBRL, according to Pinkster (2003) is a ‘groundbreaking’ technology, a sleeping giant that is expected to become the global standard for on-line standard business reporting (SBR). XBRL is essentially the ‘digital language of business’ (Hoffman & Strand, 2001) that has the potential to fundamentally revolutionise the way in which business reporting is undertaken and in the process disrupt the delicate balance characterising the present business reporting paradigm. It will also create opportunities for firms, governments and nations to

leverage knowledge gained from synchronised, ‘real-time’ or ‘interactive’ data in creating greater transparency, increased cost efficiencies, productivity gains, economic growth and thus wealth creation.

Disparate business reporting taxonomies have contributed to inefficiencies and an increased reporting burden for Australian businesses. The Australian Chamber of Commerce and Industry (ACCI) estimated in 2006 that the cost to Australian businesses from increasing reporting burden was \$86 Billion. This staggering figure was questioned by the Federal Government’s Regulation Taskforce and Productivity Commission, however even their estimate of ‘tens of billions of dollars’ (for SMEs alone) provides some understanding of the significance to business and the nation of an alternate approach that standardises and integrates business reporting (Banks Report, 2006). Visionary approaches to adopting and managing this innovation can also potentially create sustainable competitive advantage at both firm and national levels. Braue (2005) details that XBRL in 2002, was heralded as the ‘lingua franca of e-government’. In 2003, The Australian Federal Government through the Australian Prudential Regulatory Authority (APRA) was one of the first bodies in the world to adopt XBRL to support SBR. However, six years down the track the adoption rate by the financial services and insurance industries has been poor and XBRL according to Braue (2005) remains more of a ‘regional dialect’. Given widespread acknowledgement of the potential of SBR and XBRL (at least by regulators) it appears Australia’s early foray into the use of XBRL was marred by both technical and educational issues. On the technical side, software development was aimed at the reporting level and not at an enterprise architecture level resulting in institution’s underlying applications not effectively integrating with XBRL. On the educational front, Colin Cayless CIO at APRA, laments that his organisation has “done a fair bit of development on this, and we’re hoping that the marketplace and consulting firms would drive this harder...but if you say ‘XBRL’ to people in most environments, people don’t know what it is” (cited in Braue, 2005:6). Though this attempt at early adoption may have stumbled, governments and businesses worldwide are warming to the potential of this innovation and the Australian Federal Government is committed to long-term universal uptake of SBR using XBRL.

Globally, the XBRL standard is now gaining acceptance (Gunn, 2007) and the Australia Government is aware that XBRL will become the international digital language of business and that its adoption is not a matter of if, but when. The government has invested over \$200 million in its ‘Australian Government Initiative on SBR’. In May, 2008 the US Securities and Exchange Commission (SEC) following an investment of over US\$54 million to XBRL-enable the US financial statement taxonomy, decreed a phased mandatory implementation beginning with companies turning over more than \$5bn annually for financial periods starting on or after 15 December, 2008 and extending in successive years to other US and international filers. Following this, companies reporting under International Financial Reporting Standards (IFRS) will also have to submit their quarterly and annual results to the SEC via XBRL (Stokdyk, 2008). Figure 1 maps the development cycle and state of worldwide adoption.

Figure 1
Global Adoption of XBRL



(Source: Deloitte, 2008)

A study undertaken by the Federal Financial Institutions Examination Council of 8,200 banks in the U.S. that trialled the adoption of XBRL, found that there were major gains in data cleanliness

and accuracy, a 20% rise in analyst productivity and report preparation time reduced from weeks to hours. More broadly it has been estimated that “the cost of report preparation can be reduced by 30 to 70 percent using XML formats such as XBRL” (Willis & Hannon, 2005:61). The Australian Government Initiative on SBR (2008) has predicted that, “SBR is expected to save Australian businesses \$795 million per year on an ongoing basis, freeing up resources for more profitable activities. In addition, accountants, bookkeepers, tax professionals and software developers will have access to a powerful system for improving service delivery and productivity”. The focus of the Australian Government Initiative on SBR has been on cost efficiencies in regulatory environments, yet there appears to be vast potential beyond this that has strategic implications at enterprise and national levels. XBRL enabled SBR has the potential to revolutionise how business is undertaken, driving developed economies further down the knowledge economy global freeway.

Social and Environmental Sustainability Business Reporting Using XBRL

It is of note that U.S. President Obama in his first days of office highlighted the need for greater transparency and accuracy in business reporting and that the people of America and the world cannot afford to consume the world’s resources while ignoring the effect this has on the environment and the social fabric of nations. The need for greater transparency has become even more critical as a result of the current global financial crisis. Sustainability addresses the needs of present generations without compromising the ability of future generations to meet their needs; it affects the business context and markets via environmental, social and economic challenges (Hoffman & Woody, 2008). The importance of sustainability is obvious considering that both Australian Prime Minister Rudd and President Obama addressed sustainability in their election victory speeches. Sustainability has strategic impacts on business in aspects of production economies, cost competitiveness, investment decisions and asset valuation (Enkvist *et al.*, 2007). Macro level multilateral doctrines such as the Brundtland Commission Report (1987) emphasise the need to integrate environment with decision-making processes in firms at a strategic level. Without the development of systems that systematically and cost-effectively collect uniform and

comparable information from various organisations, any realistic quest towards sustainable development will be thwarted.

The adoption of SBR driven by XBRL has major implications for aggregating standardised, digitised information from different organisations in respect of their impacts upon the environment, and their strategies to reduce impacts. At the present time, many organisations in Australia collect and report information about various aspects of their environmental performance, however, this information is not then used to provide an aggregated account of organisations' impacts, or initiatives, in particular regions. The diversity of reports produced and that the reports produced are print based, constrains any realistic attempt to formulate an informed understanding of the impacts firms have in regard to environmental and social issues and thus any strategic approach to addressing the concerns. For Australia to address various environmental threats standardised, aggregated data is required. Encouraging organisations to adopt uniform XBRL taxonomies provides an important means to understand regional impacts and efforts – something necessary for an informed understanding of where the Australian environment is heading, what business enterprises are doing, and in determining what further actions or regulations must be introduced. Properly developed, XBRL provides exciting opportunities for addressing environmental and social issues within the Australian (and international) arena.

Though there appears to be an inevitable path globally towards the adoption of SBR using XBRL in order to improve financial reporting, *this is not the case when it comes to social and environmental sustainability reporting*. According to the Global Reporting Initiative (GRI), which is a multi-stakeholder global alliance that has been responsible for developing the world's most authoritative sustainability reporting guidelines (see www.globalreporting.org), much of the reporting is still print-based and specific to the particular reporting entity hence there is an immediate need for research which will seek to explore and develop a new frontier of Sustainability Reporting that embraces and fully utilises a digitised system of reporting allowing information from individual reporting entities to be aggregated at regional and national levels. It is imperative

that new and innovative approaches to sustainable business practices based on knowledge and technology are developed so that enterprises, small, medium and large and indeed governments can make decisions that will define how their operations, products, services and activities impact upon the environment and society at large.

Sustainability and climate change are key issues confronting the Australian and global environment. At the moment relevant firm generated information is not standardised, disparate and quite dispersed and does not link in any way, nor is it captured in any form of central repository (Deegan & Ji, 2008). Data is also collected individually by Australian Greenhouse Office, various state based EPAs (Environmental Planning Agencies) or equivalents, through the National Pollutant Inventory, through Local Councils, State Governments, Federal Government, and so forth. The dispersed and unlinked data sources mean that we are unable to understand aggregated impacts on the environment at various regional, state, or national levels. For example, recent research indicates that within Australia there is a total lack of centralised data on contaminated sites, such that it is near impossible to obtain any perspective on its significance. If we are to tackle various environmental problems then we need to access meaningful data. This means that organisations need to adopt a uniform approach that can then be aggregated in real time overcoming any information lag issues which will enable better strategic responses to the long term impacts of business upon the environment, leading to more sustainable approaches to business enterprise;

SME Environmental Sustainability Performance

Analysts such as Gouldson and Murphy (1997) have noted a long history of business entities in particular SMEs, decoupling economic environmental performance from financial performance, when the reality is that both are inextricably linked. Hillary (2004) reports that the vast majority of SMEs remain indifferent to many environmental issues, even though Revell and Rutherford (2003) in investigating the poor environmental performances of SMEs in the UK, detail that it has been estimated that SMEs account for as much as 60-70 percent of all business related carbon

dioxide emissions. It appears that SME owner-managers fail to engage with environmental and social issues because of a number of factors, these include a feeling of limited responsibility (it's a government problem); low levels of 'eco-literacy'; a feeling that compliance is costly; lack of regulatory awareness; economic interests being favoured over environmental or social considerations; little external pressure from stakeholders including customers and suppliers and technical knowledge deficiencies regarding environmental management systems (Gerstenfeld & Roberts, 2000; Hilley, 2000; Tilley 2000; Revell & Rutherford 2003; Hutchins & Sutherland, 2008).

In Australia, the picture is unfortunately similar, with Hussey and Eagan (2007) for example reporting that only 28% of Australian SMEs were familiar with cleaner production practices (let alone actually implementing such practices). The authors acknowledge that many SME owner/operators 'profess' great concern regarding sustainability but possess little knowledge regarding ways in which to mitigate their concerns through their own business activities. Andrews, Stearne and Orbell (2002:373) are somewhat more scathing lamenting SMEs, "often display practices that are wasteful of raw materials and energy and are indifferent to, or flout, environmental laws and standards". It would appear that new approaches to raising the collective consciousness of SMEs in regard to environmental and social sustainability are required and that any prescriptive approach must benefit business operators in terms of cost reductions, efficiency gains and increased profits. The research reported on here aims to deliver such outcomes and comes at a juxtaposition in time when environmental and social accountability and sustainability have been bumped from the front page by the global financial crisis.

The research seeks to overcome identified issues by investigating organisational and inter-organisational (including regulators) level decision-making, processes and knowledge flows in regard to Sustainability Reporting so that a social and environmental sustainability taxonomy can be developed and modelled in order to greatly enhance enterprise structures, systems and processes. This taxonomy will be designed, modelled and tested to ensure successful integration is achieved

with current (and future) financial reporting requirements. To accomplish this, a novel approach to business research that combines analytical, intelligent tools from the computing science domain has been developed. This approach enables 3D data visualisation in a virtual enterprise environment to be undertaken, overcoming any need to disrupt a firm's systems and processes.

Methodology

This research investigates digitalisation of standard business reporting (SBR) using eXtensible Business Reporting Language (XBRL) and extends its application into the Sustainability Reporting domain. It also contributes to novel intelligent methods in Enterprise Architecture Modelling, Simulation and 3D Visualisation touted 'Intelligent Virtual Enterprise Engineering' (IVEE). Given the radical departure from current standards and practices, or as Christensen (2006) describes, *disruptive* nature of the innovation being investigated in this project a conceptual framework is difficult to develop *ex ante* and will emerge from the research design. This approach to researching disruptive innovations using multi-methods in an action research based approach in studying a system and concurrently collaborating with members of the system in changing it, has been taken by others including, Thomond, Hertberg and Lettice (2003) in their work with the Vodafone Group Research and Development in Europe. The research will focus on four critical issues through each stage;

1. Development of a Sustainability Reporting taxonomy that achieves an accurate, trustworthy, reliable and transparent approach to standardised, digital reporting;
2. Ensuring the taxonomy and reporting process can be seamlessly integrated with SBR using XBRL;
3. The role of technology in harnessing heterogeneous knowledge in advancing digital business environments;
4. Changes required to educational pedagogy as a result of impending paradigmatic shifts to the way business reporting, incorporating Sustainability Reporting, is undertaken.

This will be achieved in 4 stages, each of which is now discussed in further detail.

Stage 1: Case Study Development. The first phase of the research will take 18 months and will involve a pilot study followed by multiple case study development at both the SME level and large company level so that comparative analysis of awareness of social, environmental and sustainability business issues can be undertaken. The cases will be drawn from industry sectors that have significant environmental impacts: Electricity, Gas & Water, Mining, Transport & Storage, Construction, Education, Property and Business, ICT and Government Administration. The case studies will investigate the level of awareness amongst firms and industry sectors regarding Sustainability Reporting and will map existing data collection, recording and reporting functions. Extensive reporting workflow modelling will be carried out to understand existing systems both from a business and computer science perspective. Information will be collected about the staff and time commitments involved in the current systems and calculations will be made of related costs. This will allow a base-line to be established which can be used to compare against the proposed digitised Sustainability Reporting taxonomy. Once existing systems and their related costs, processes and inadequacies are understood the data will be used to inform modelling and simulation of critical processes and systems' functionality using IVEE. Comparative workflows will be developed and incremental costs (training, software development costs etc) will also be determined. Finally, the iterative cycling between case study analysis and virtual enterprise simulation will enable a virtual firm and its components to be modelled avoiding the need for structural change to a functioning enterprise and any associated disruptions that would accompany such a change. The purpose of these demonstration projects is to clearly identify the benefits and associated costs involved in adopting a standardised, digital approach to Sustainability Reporting, and to provide a basis for key stakeholders to understand the before and after comparatives. As a result of Phase 1 of the research, theoretical propositions will be developed that will then be tested in Phase 2 of the project.

Stage 2: Theory Testing. The second phase of the research will take 18 months and will build on the work undertaken in Phase 1. The research will be expanded beyond the sample frame for the case studies and a survey will be developed based on development and implementation issues

regarding the proposed Sustainability Reporting taxonomy that will be used to collect data on causal processes that emerge from the IVEE modelling and simulation. The data will be analysed using structural equation modelling (SEM). The aim of this is to move the analysis into the inter-organisation domain. A target sample of 3,000 companies drawn from the Business Services sector including ASX top 200 companies as well as mid-market firms engaged across the Services Sector Industries as detailed by the Australian Bureau of Statistics will be surveyed. What is happening at the firm level, albeit abstracted and encapsulated to the essential decisions/flows/processes happening at its boundaries and/or the boundaries of its immediate sub-companies, is the foundation for further modelling and simulation at an inter-enterprise level. Such a view promises opportunities to carry across into this domain, models of concurrently interacting systems/components; to utilise (mathematical) logical and statistical methods as well as model-checking and simulation in which impacts are shown and visualised. This will provide opportunity for the researchers to identify, analyse and correct outliers that an automatic offline modelling and analysis approach cannot readily identify. Such modelling and simulation include those elements of the real data, processes and systems that will then be mapped to a formal taxonomy on which our proposed enterprise level component system can work. This formalisation itself promises to have tremendous benefits in that it will bring to the fore data errors, process inconsistencies and bottlenecks. Incorporating methods assisting non-technologists with this formalisation and 'migration' to a computer model of the virtual enterprise will imply immediate benefits and opportunities for cost savings and knowledge development. Novel 3D visualisation methods will be developed and prototypically trialled in supporting tools to ease the acceptance of these new methods for strategic-level decision support.

Stage 3: Calibration and Modelling via Actual Systems Tracking. To check-recheck causal relationships, deal with the complex interdependent relationships, and examine the temporal dimensions of sequences of critical events in relation to the modelling and simulation in Phase 2, a purposeful sample will be drawn from companies in the Phase 2 sample. This will enable model-driven monitoring and analysis which will be conducted in parallel thus informing actual systems

tracking and calibration of modelling in enhancing enterprise structures, processes and flows at *both* intra-firm level and inter-firm level. This phase is expected to span over 12 months and will be critical in optimising modelling and simulation outputs.

Stage 4: Diffusion of Modelling Results into the Educational Domain. This phase of the research will take approximately 12 months and will see the researchers identifying educational issues and opportunities that will impact upon the nation's higher educational institutions and professional bodies, as a result of the proposed research. This will be done through a series of focus groups with industry participants in the study, experts from industry bodies such as the CPA, GRI delegates and educational professionals drawn from higher educational institutions. This will result in a series of recommendations regarding curricula development and pedagogical approaches to development and delivery of programs that will meet the needs of industry and regulatory bodies moving forward into the digital business reporting age. A series of case studies will also be written as well as chapters in textbooks accompanied by a DVD with interactive data and supporting Sustainability Reporting taxonomy prototype to assist educational institutions in implementing and managing educational change.

Results to Date

The research project is in its initial stages, with a multi-discipline, international research team formed that includes researchers engaged in innovation, social and environmental accounting, virtual enterprise engineering and data visualisation. A pilot study involving sixty two clients of a major services firm based in Melbourne Australia has been undertaken to investigate the level of awareness regarding impending regulatory changes to the way businesses are required to report on their activities. Operationally, the major aim of the pilot study was to model and test the use of XBRL using historical financial data (due to greater data homogeneity) from the sixty two firms, which were of various sizes and engaged in a variety of industry sectors. This could then provide a baseline for future development of an XBRL enabled standard business reporting taxonomy.

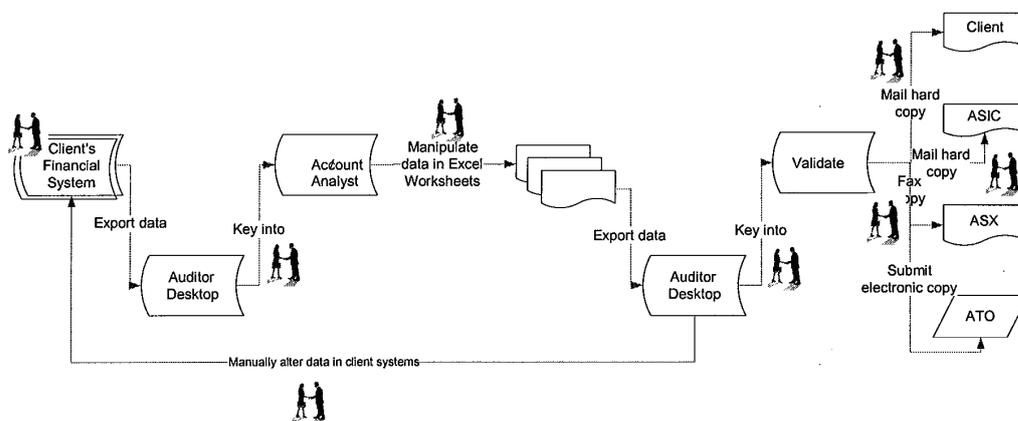
Table 1
Sample Firms

Industry	Firm Size			Totals
	Small	Medium	Large	
Property & business	2	1	2	5
Finance & insurance	1	3	1	5
Construction		2	2	4
Wholesale trade	4	2		6
Communication	3	3	4	10
Accommodation, cafes & restaurants	3	5		8
Retail trade	2	3	2	7
Transport & storage		1	2	3
Health & community	1	2	2	5
Personal & other		2	4	6
Government administration		2	1	3
	16	26	20	62

Of the sixty two firms studied, only one had any knowledge of standard business reporting using XBRL and all sixty two firms were unaware of the Australian Federal Government's 2012 mandated adoption proposal. Indeed, great alarm was expressed across the board as firms felt that communication of this proposed roll-out had been poor especially given the significant nature of the innovation. Notably, there was a complete lack of focus concerning integration of information regarding environmental performance with that of firms' financial performance; it just did not register as being a significant priority for firms. Of the 16 small firms (less than 20 employees), none could produce any documentation regarding environmental performance, while only two of the twenty six medium-sized firms (20-299 employees) and seven of the twenty large firms (over 300 employees) were able to provide evidence of a formalised approach to documenting environmental performance, albeit stand alone reports with a diverse set of indicators. Hence, to test the functionality, reliability and traceability of data management using XBRL, historical financial reports were utilised. Current workflow processes were mapped with up to 70% of the work being performed by hand, re-keying and reworking the same data many times over. Figure 2 presents the generalised workflow from the firm to submission of reports to the Australian Tax

Office (ATO), the Australian Stock Exchange (ASX) and the Australian Securities and Investments Commission (ASIC)

Figure 2
Financial Reporting Workflow Map



(Source: Deloitte, 2008)

As can be noted the process is less than optimal with some firms required to report to three separate agencies and the extended and convoluted nature of the reporting process means it is virtually impossible to eliminate errors. Additionally, there is great cost to firms in terms of labour hours, productivity loss, compliance, printing and use of IT. To trial the use of XBRL in providing a more optimal approach to business reporting the following process was modelled and tested:

Figure 3
XBRL enabled Financial Reporting Workflow



(Source: Deloitte, 2008)

The trial was on the whole successful resulting in an average 75% reduction in overall time to process reports, average 254% improvement in error identification and elimination and an average

estimated cost saving of \$3,200 for small firms, \$6,800 for medium-size firms and \$13,100 for large firms in terms of labour hours and service based fees alone. Potential revenue gains were not factored into the savings though the potential to generate additional revenue through increased productivity is significant. Heterogeneous data sets from the various companies were able to be aggregated into a single, standardised data set which enabled more effective analysis to be undertaken of the data. There were issues which came to light as a result of the pilot which will be addressed as the research project moves forward including constraints with existing XBRL software solutions such as UBMatrix Report Builder and UBMatrix Enterprise Application Suite, specifically:

- Report Builder software did not correctly output data from the XBRL instance to the Excel spreadsheet;
- Report Builder error messages were poorly described and retarded progress;
- Online storage repository and workflow requires further development;
- The slow download speed of the portal made it impractical to store and version the reporting taxonomy within the Enterprise Application Suite Taxonomy Manager, and it was therefore stored offline on a network disk. This hampered attempts to realise real time digital business reporting.

None of these issues are insurmountable and given this was a first-run trial the results were more than satisfactory. The challenge moving forward is to develop and build the Sustainability Taxonomy and to simulate and model its effectiveness in integrating with financial reporting taxonomies and to ensure that the data is able to be easily visualised by end users particularly SME owner/operators so that any technical knowledge deficiencies can be overcome.

Conclusions and Implications

This research project is significant at both the enterprise and national levels as it investigates the adoption and diffusion of a disruptive innovation. The anticipated outcomes from the research will provide businesses, policy-makers and academics with knowledge not otherwise available

within the Australian context and with practical strategies regarding important issues that have implications at firm, region and national levels. It is predicted that the adoption and diffusion of a universal digital language of business will enable a variety of reports and formats to be easily generated from a single active data set – greatly increasing efficiency and transparency. Furthermore, modelling the cost impact implementation of the model Sustainability Reporting taxonomy for businesses and identifying the cost efficiencies that would result in terms of reduced compliance costs (compliance costs would be reduced because a well devised XBRL taxonomy would facilitate single data entry which could be used by multiple government agencies) will result in significant benefits to firms. Likewise, organisations would be able to efficiently communicate their environmental credentials which would be relevant to various organisations seeking to source products from environmental-aware service and product providers. Current and future research will establish whether this is achievable in terms of Sustainability Reporting by simulating standardised Sustainability Reporting (that could then be used by various parties, including numerous government agencies) from a single data set to assess data accuracy, validation and trustworthiness. A major thrust of this project extends beyond requirements for current business reporting as regulatory mandates are increasingly requiring businesses to report on sustainability (Deegan & Blomquist, 2006). Future modelling and simulation will focus particularly on Sustainability Reporting to develop a reporting taxonomy that will align with required financial reporting delivering an integrated model that seamlessly encompasses financial, social and environmental accountability performance;

With the increased pervasiveness of IT in all business and given the relatively large carbon footprint of IT, green-washing IT (Murugesan, 2008) is also gaining in importance and its impact. Generally, green-washing refers to disingenuous spin or misleading claims on environmental impact often to cash in on the increasing environment-sustainability movement. Specifically for Enterprise-IT, strategies and analytics for ‘green auditing’ to balance IT benefits and detrimental impacts will be investigated as part of this on-going research.

Reported information will become more dynamic in nature providing opportunity to enable better decision-making by overcoming the lag and disparity present in the current print-based reporting regime. However, more dynamic and interactive information brings with it a set of problems that will require advanced solutions. Forthcoming research will allow modelling of alternate structures, processes and data flows to permit system's tracking and enable staged change to be simulated so as to avoid disruptive shocks to firms in meeting the challenges of a digital reporting regime. Virtual enterprise modelling will enable the research team to assess error propagation, business process reliability, controllability and transparency to develop high-level system's quality to better meet the needs of firms in moving from manual systems to automated, digital systems. Greater amounts of better integrated, dynamic and more reliable data will enable greater awareness and knowledge of issues that impact upon Australia's long-term social, environmental and economic health. This will fuel more sophisticated and pro-active approaches to future research on sustainable business practices and assist in reducing the likelihood of information shocks on the nation's enterprises. The dual streams of the research will enable data collection in the field to inform the virtual modelling, reducing potential information shocks, in turn enabling calibration of the virtual simulations via feedback from actual systems tracking. This will drive development of better monitoring and analysis of heterogeneous data flows.

Fundamental change will mean that the roles of various actors in the business reporting supply chain will need to be modified or indeed profoundly altered. This shift in roles and focus, results in significant and obvious implications regarding how we educate business managers of the future. In years 4 and 5 of the proposed research, following development and testing of the model Sustainability Reporting taxonomy, the research team will strongly focus on implications to educational institutions and professional bodies to deliver case study material, textbooks and a DVD with interactive data and accompanying taxonomy prototype to assist educational institutions in managing educational change, especially at the research training and postgraduate levels as a result of the coming digital Sustainability and Business Reporting era.

References

Australian Government Initiative on Standard Business Reporting.

http://www.sbr.gov.au/content/what_is_sbr.htm (Accessed March 15, 2009).

Braue, D. (2005) "You Can Lead a Government to XML", CIO Business Technology Leadership on-line.

<http://www.cio.com.au/index.php/id;1160512555;fp;4;fpid;21> (Accessed October 30, 2008)

Christensen, C. M. (2006). "The Ongoing Process of Building a Theory of Disruption", *Journal of Product Innovation Management* 23(1): 39-55.

Council, C. (1999). "Federal enterprise architecture framework", Version 1.1. Retrieved from www.cio.gov/documents/fedarch1.pdf (visited on 29/1/2003), 80.

Deegan, C., Ji, S., (2008). "Finding Information about contaminated sites in Australia: There has to be a better way", *Environmental and Planning Law Journal*, Vol. 25, No. 4, pp. 284 – 297

Deegan, C. & Blomquist, C., (2006). "Stakeholder Influence on Corporate Reporting: An exploration of the interaction between WWF-Australia and the Australian Minerals Industry", *Accounting, Organizations, and Society*, Vol. 31, Issues 4/5, pp. 343 – 372.

Dod, U. (2007.) "DoD Architecture Framework", Version 1.5. USA, Department of Defense.

Enkvist, P.-A., Naucler, T. & Rosander J. (2007). "A cost curve for greenhouse gas reduction", *The McKinsey Quarterly* 2007(1): 35-45.

Gilbert, D.H. (2007), 'Managing Firm Innovativeness: Lessons from Japanese SMEs', *International Journal of Organisational Behaviour*, Vol 12:1, pp. 126-143.

Gouldson A, Murphy J. (1997). *Ecological Modernisation: Restructuring Industrial Economies*. Political Quarterly–Blackwell: Oxford.

Gunn, J. (2007). "XBRL: Opportunities and Challenges in Enhancing Financial Reporting and Assurance Processes", *Current Issues in Auditing*. 1: 36-43.

Hardwick, M. & Bolton R. (1997). "The industrial virtual enterprise", *Communications of the ACM* 40(9): 59-60.

Hoffman, C. & Strand, C (2001). "XBRL Essentials". AICPA. New York.

Hoffman, A. J. & Woody, J. (2008). "Memo to the CEO: Climate Change, What's Your Business Strategy?", Cambridge, MA: Harvard Business Press

Hoogervors, T, J. (2004). "Enterprise Architecture: Enabling Integration, Agility and Change", *International Journal of Cooperative Information Systems*, 13, 213-233.

- Hutchins, M.J., and J.W. Sutherland, 2008, An Exploration of Measures of Social Sustainability and Their Application to Supply Chain Decisions, [Journal of Cleaner Production Volume 16, Issue 15](#), October 2008, Pages 1688-1698 Sustainability and Supply Chain Management.
- Katzy, B. & Löh, H. (2003). "Virtual Enterprise Research State of the Art and Ways Forward", Proceedings of 9th International Conference on Concurrent Enterprising.
- Kloeden, P.A. (2006). "XBRL: Cost Benefit Analysis in Theory and Application", Working Paper, Saunders College of Business RIT.
- Krämer, B. & Schmidt, H. W.: Developing integrated environments with ASDL. *IEEE Software Journal*, 89 (1): 98-107, 1989.
- Krämer, B. & Schmidt, H. W.: Components and tools for online education. *European Journal Education Research, Development and Policies*. 336 (2): 195-222, 2001
- Lankhorst, M. (2005). "Enterprise Architecture at Work: Modelling, Communication, and Analysis", Springer.
- Lefebvre, E., Lefebvre, L. A.. and Talbot, S. (2003). 'Determinants and Impacts of Environmental Performance in SMEs'. *R&D Management*, Vol. 33, pp. 263-283. Available at SSRN: <http://ssrn.com/abstract=411175>
- Mod, M. (2005). "MODAF Handbook, technical specification for MODAF", Ministry of Defence.
- Murugesan, S. (2008.) "Harnessing Green IT: Principles and Practices", IT Professional, 10, pp. 24-33.
- Meyer, B., Mingins, C. & Schmidt, H.W. "Providing trusted components to the industry. *IEEE Computer*". 5(31):104–105, 1998.
- OECD Reports, (2006). 'Knowledge Intensive Service Activities'.
[http://www.oalis.oecd.org/oalis/2006doc.nsf/linkto/dsti-doc\(2006\)3](http://www.oalis.oecd.org/oalis/2006doc.nsf/linkto/dsti-doc(2006)3) (Accessed October 14, 2008)
- Pinkster, R. (2003). "XBRL awareness in auditing: a sleeping giant?". *Managerial Auditing Journal* 18 (9), pp. 732–736.
- Putman, J. (2000). "Architecting with Rm-Odp", Prentice Hall PTR.
- Reussner, R.-H., Schmidt, H. W. & Poernomo I.: Reliability prediction for component-based software architectures. *Journal of Systems and Software*, 66(3):241-252, 2003
- Schekkerman, J. (2004). "How to Survive in the Jungle of Enterprise Architecture Frameworks: Creating Or Choosing an Enterprise Architecture Framework", Trafford Publishing.
- Schmidt, H.W. & Wegner, L. (2000). "Shared XML Documents in Service Centers of the Future", Proc. 1st Intl. Conf. on Web Information Systems Engineering, IEEE Computer Society Press, vol 2., pp. 105-112.
- Schmidt, H.W., Compatibility of interoperable objects. In: Kramer et al (eds): *Information Systems Interoperability*, 143-181, Research Studies Press, 1998

- Schmidt, H.W., Trustworthy components: Compositionality and prediction. *Journal of Systems and Software: Special Issue on Component-Based Software Engineering*, 65(3):215–225, 2003.
- Sowell, P. K. (2006). “The C4ISR Architecture Framework: History, Status, and Plans for Evolution”, MITRE CORP MCLEAN VA.
- Spencer, J. (2004). “TOGAF”, Enterprise Edition, Version 8.1.
- Spewak, S. H. & HILL, S. C. (1992). “Enterprise Architecture Planning: Developing a Blueprint for Data, Applications, and Technology”, John Wiley & Sons.
- Stokdyk, S. (2008). SEC ready to mandate filing accounts in XBRL <http://www.accountingweb.co.uk/> (Accessed October 15, 2008).
- Tang, A., & J. Han, et al. (2004). “A comparative analysis of architecture frameworks”, 11th Asia-Pacific Software Engineering Conference.
- Thomond, P., Herzberg, T., & Lettice, F. (2003). “Disruptive Innovation: Removing the Innovators’ Dilemma”, paper presented at the British Academy of Management Annual Conference, Harrogate, UK, September 2003.
- Vernadat, F. B. (2002). “Enterprise modeling and integration (EMI): Current status and research perspectives”. *Annual Reviews in Control* 26(1): 15-25.
- Wegmann, A. (2003). “The systemic enterprise architecture methodology”. International Conference on Enterprise Information Systems.
- Willis, M. & Hannon, N. (2005). “Combating everyday data problems with XBRL, Part 2”, *Strategic Finance*, August: 59–61.
- Zachman, J. A. (1996). “Concepts of the Framework for Enterprise Architecture”, Los Angeles, CA.
- Zachman, J. A. (1997). “Enterprise Architecture: The Issue of the Century”, *Database Programming and Design*, 10, 44-53.

Decision factors on selecting innovation activity patterns and the performance of SMEs

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Although enterprises do innovation activities for maximizing their profit and efficiency, not all innovation activities guarantee a positive effect. Enterprises need to adapt an appropriate innovation activity, which is suitable for their current business status. Various papers have verified innovation activities have positive or neuter influence on the enterprise's performance.

This paper classified innovation activity patterns for SMEs and investigated factors on which SMEs select the patterns. We collected and used 530 data samples of Korean SMEs whose sales exceed 8 million dollars. The factors that we considered are as follows: 5 levels of enterprise growth and the life cycle of the primary product. As a result, we found that most innovation activities have positive effects on the performance of the SMEs. However, we verified that there are some specific rules to match innovation activity patterns and enterprises. And there are differences according to which activity pattern the enterprise selects.

Keyword: innovation, enterprise's performance, innovation factors, innovation activity

Track: 6. Innovation in SMEs

EFFECTIVENESS OF AN ENTREPRENEURIAL EDUCATION PROGRAM*

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Abstract

The Center for Entrepreneurship Development of the Universidad Icesi started in 2005 a new measurement of the entrepreneurial and intrapreneurial activities done by their alumni who got their undergraduate degrees between 1984-1999. The Center also wanted to know the incidence it has had in the decision to become entrepreneurs and also identify new areas of support that may be required for the students.

In the first stage two approaches were used: an internet questionnaire and a telemarketing company to approach the 2504 alumni graduated in the study period to get answers to a short questionnaire that will allow to split the alumni in: Entrepreneurs, Employees, Entrepreneurs and employees, independent workers.. A valid sample of f 670 questionnaires was obtained.

The second one was a detailed questionnaire that was applied in personal interviews only to the acting entrepreneurs. A total of 68 valid questionnaires were obtained

1. Introduction

The Universidad Icesi was founded in 1979, by the main entrepreneurial leaders from the Valle del Cauca, with the purpose of contributing to the harmonic development of the region, shaping the new entrepreneurial leaders that Colombia needs, under the basic principles of: free enterprise system, entrepreneurship, democracy, social responsibility, ethics and justice.

The “Centro de Desarrollo del Espíritu Empresarial” (Center for Entrepreneurship Development) (CDEE by its Spanish denomination) was created on January 1st 1985, as an

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academic unit of the university, with the mission of forging a new Entrepreneurial Culture through academic processes and with the permanent participation of the academic and entrepreneurial community. The entrepreneurial culture should be full of innovation and social responsibility and able to become an engine of development in all its schemes and procedures. The main objectives of the Center is to provide the knowledge, the attitudes, the values, the culture and the support system to help the students in the process of becoming entrepreneurs and/or intrapreneurs.

The fundamental purpose of the CDEE is to motivate and to shape, through educational activities, the members of the community under its area of influence, in the development of innovative and creative actions that will allow them to become, throughout their lives: creators of new and competitive organizations, leaders of the existing ones, creators of wealth, productive employment, social wellbeing and personal, professional and social satisfaction.

Through special educational processes denominated Entrepreneurial Education, the CDEE is committed to provide a learning, motivational, developmental and support environment, which will significantly improve the conviction and the disposition of the members of the community to act, towards the surge of new competitive organizations and to the preservation and growth of existing ones, whether they may be private or public, profit or not for profit and from any of the economy sector.

The areas of creation, appropriation, and diffusion of knowledge in which the CDEE works are: the development of the entrepreneurial spirit and culture, the creation of enterprises, the shaping of entrepreneurial leaders, entrepreneurial education, the management of family businesses and the management of Small and Medium Enterprises (SME).

These creative and innovative human beings, capable of overcoming the limitations that the environment presents, skilled to take advantage of opportunities independent of the volume of their own tangible resources, eager to transform their ideas into actions capable of nurturing the economy, the business activity and the quality of life, are the business leaders that the CDEE seeks to shape.

In 1991 – 1992 several research projects were conducted to find out the effect of entrepreneurial education in Icesi's alumni.

In 1998 the Center for Entrepreneurship Development approached Corona Foundation; to finance a project which would allow a careful evaluation of the entrepreneurial activities of Icesi's alumni. However Corona Foundation asked that the evaluation cover three Universities in Cali (Universidad Icesi, Universidad Javeriana, Universidad del Valle) in their Business Administration, Industrial Engineering and Systems Engineering programs. Thus the alumni of 6 undergraduate programs, [1 Business Administration (Day program), 2 Business Administration (Evening program), 2 Industrial Engineering and 1 Systems Engineering], who graduated in the 1984 – 1993 period were studied.

In 2005 a new study to measure entrepreneurial activity of alumni was designed, but covering only Icesi's alumni who got their undergraduate degrees in the period 1984-1999, to be sure that they had been out of school at least 5 years. Some adjustments were done to the previous questionnaires but the main research goal was kept in terms of measuring the development of entrepreneurial activities done by the alumni either in a 100 percent entrepreneurial career project, or in a combined employee-entrepreneur career project, or in an intrapreneurial career inside a company or a family business. In addition to the measurement of the entrepreneurial or intrapreneurial activities done by the alumni, the Center wanted to know the incidence it has had in the decision to become entrepreneurs and also identify new areas of support that may be required for the students

The specific objectives were:

- a) To measure the proportion of entrepreneur and/or intrapreneurs alumni from each program and each promotion.
- b) To characterize the business activities of the entrepreneurs.
- c) To identify the educational experiences that in their opinions were significant for becoming entrepreneurs and establishing their own businesses.
- d) To receive feedback from alumni that would allow the University and the programs to improve their entrepreneurial education activities and to provide better support not only to current students but also to alumni.

2. Methodology

2.1 Basic Questions

Six basic questions were formulated to fulfill the research objectives:

- a) What is the proportion of alumni, who have started their own businesses? In which conditions? What are their characteristics?
- b) What other activities have they undertaken that could be considered as entrepreneurial?
- c) What benefits do they consider were derived from their entrepreneurship related courses and extracurricular activities?
- d) Which aspect of the University educational experience was basic for their entrepreneurial process?
- e) In what aspects should the CDEE, or related units in the university, improve their activities to help students and alumni to become entrepreneurs?

2.2 General methodology

In this case the research was conducted in two stages: The first one was the use of two approaches; a internet questionnaire and a telemarketing company to approach the 2504 alumni graduated in the study period (1984-1999) to get answers to a short questionnaire that will allow

to split the alumni in four different categories: Entrepreneurs, Employees, Entrepreneurs and employees, independent workers. In the employee case the questionnaire asked about intrapreneurial projects developed and also about entrepreneurial project done in previous years. A total of 670 questionnaires dully processed were obtained.

The second one was a more detailed questionnaire that was applied in personal interviews only to the acting entrepreneurs in order to characterize their companies and to get some additional information about the new support activities that the Center for Entrepreneurship Development should do. A total of 68 questionnaires dully processed were obtained

2.3 Sample Design

The population was defined as all the alumni who had obtained their degrees in the period from January 1984 to December 1999. Once the total population was defined the first stage was to find out e-mails, telephone and physical address to contact them personally for the purposes of the research. This was one of the main difficulties of the research, because the alumni's databases were not actualized and many were out of reach.

Through different mechanisms: professional directories, direct reference among alumni, old employers, parent's information, chain information development, Icesi's alumni group, new directories were developed covering as much as possible populations from each graduating class in every one of the two undergraduate programs: Business Administration(B.A.) and System Engineering(S.E.) As shown in table #1, of a total of 2504 alumni, 85.1 percent of them (2131) are from the B.A. program and 14.9 percent of them (373) are from the S.E. program

In the first stage of the research it was possible to get a total of 670 dully answered questionnaires , a very significant sample of 26.75 percent of the total universe . As shown in table #1, the sample included 26.84 percent of the alumni from the B.A. and 26.27 percent of the alumni from S.E.

TABLE # 1
SAMPLE FOR FIRST RESEARCH STAGE

PROGRAM	Total Alumni	Alumni Composition (percent)	Sample Size	Sample Composition (percent)	Representativeness of sample inside group (percent)
Business Administration	2.131	85.10	572	85.37	26.84
Systems Engineering	373	14.90	98	14.63	26,27
TOTAL	2.504	100	670	100	26,75

During the second stage of the research, many difficulties were found to get personal interviews with the alumni , thus the researchers has to use a invitation that the CDEE make in order to create the Icesi's Entrepreneur Network (RedE) to get them to fill a questionnaire. Extreme care was used to take into consideration only the questionnaires of alumni who had

graduated in the study period and who had answered the first questionnaire. A total of 68 valid questionnaires were obtained for the second stage.

As will be shown later the first stage indicated that 288 alumni were, at the time of the study, 100 percent oriented to their own enterprise. From those a 23.61 percent was interviewed for the second stage.

TABLE # 2
SAMPLE FOR SECOND STAGE

PROGRAM	Total Alumni	Sample Size	Sample Representativeness (percent)
Business Administration	260	62	23.84
Systems Engineering	28	6	21.43
TOTAL	288	68	

2.4 Information Gathering Techniques

For the first stage, several procedures were followed: initially the questionnaire was sent by e mail, to all the alumni that had an e-mail, trying to get as much as possible answers from alumni who lived in other countries or in cities that the telephonic interview may be a little bit expensive. In parallel with that, an independent telemarketing organization was hired to conduct a telephone survey for the alumni who were not reachable by e mail. Later on the telephone survey was also applied to alumni who did have an e mail, but had not answered the questionnaire by that media.

For the second stage and after numerous failed attempts to visit the alumni in their enterprises to do personally the second questionnaire, the researchers have to use the opportunity of the launching of RedE to get some questionnaires processed. In this stage we did not have the opportunity to have alumni from all the promotions, but still a very interesting sample and data was obtained from the entrepreneurs who answered the first questionnaire.

2.5 Processing Information

All the collected information was placed in magnetic media and processed with the help of SPSS when statistical information was required, or by WORD when transcription was required.

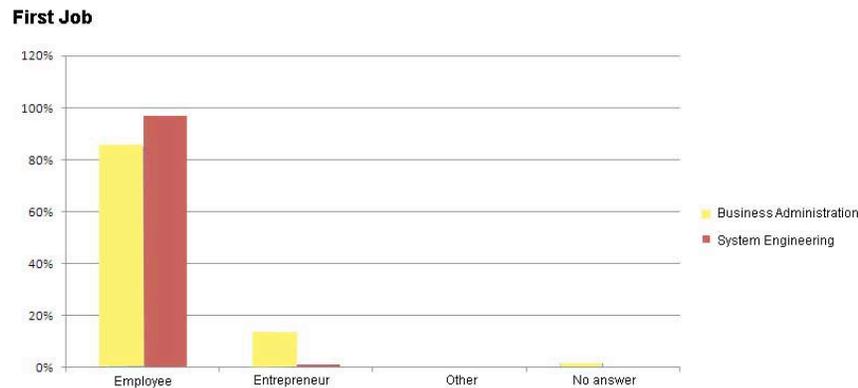
3. RESULTS

3.1 First Stage

The main results of the first stage were:

- a) As expected, when the students got their degree and started to work, most of them did start their professional careers as employees. However in the B.A. program a very significant 13 percent did start their professional careers as entrepreneurs. It is interesting to note that even though both populations B.A. and S.E. did take the same Entrepreneurship course, (required course); the proportion of young entrepreneurs was higher in B.A. than in S.E. Maybe the fact that the job market has been always more positive for the S.E., in terms of opportunities and salaries, could be the reason behind these results. Figure # 1 shows the results. This general behavior was very similar for all the promotions we did study.

Figure # 1
Initial work orientation

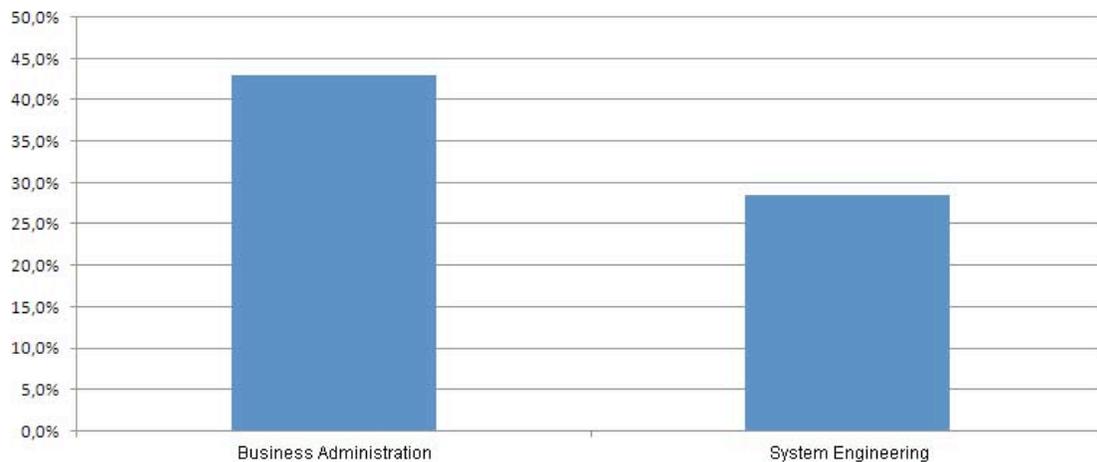


- b) One of the main goals of this research was to measure the percentage of alumni who has created a new business along their professional life. In this case we were open to accept new business created fully independent, new business created in parallel with their employee conditions, new business created in their family economic activities,. As shown by figure # 2 a total of 45.45 percent of the B.A. alumni had created a new business along their professional development, meanwhile for the S.E. the proportion is about 28.57 percent. In both cases the figures are higher than the results obtained in the previous study that covered the period 1984-1994, in which the numbers were 27 percent and 12 percent. These results are very positive, because they are indicating that every day more of our alumni are becoming entrepreneurs and also that along their professional lives, entrepreneurship is a real option.

From the sample we were able to identify a total of 288 alumni who has created their own new enterprise. Extrapolating these figures for the whole population of alumni, the estimated new business creation results are as follows: for B. A., a total of 968 alumni who had created a new business and for S.E. a total of 107 alumni who had created a new business.

The research tries to identify a pattern for the new business creation, considering the graduation date, but there was not a clear pattern about percentage of alumni who has become entrepreneurs considering as discriminate variable the year of graduation. . There is a growing proportion of new entrepreneurs along the first three promotions and then there is a decline but with several up and downs that may be related to the turmoil of the economic scenario in Colombia.

Figure #2
Alumni who had created new business



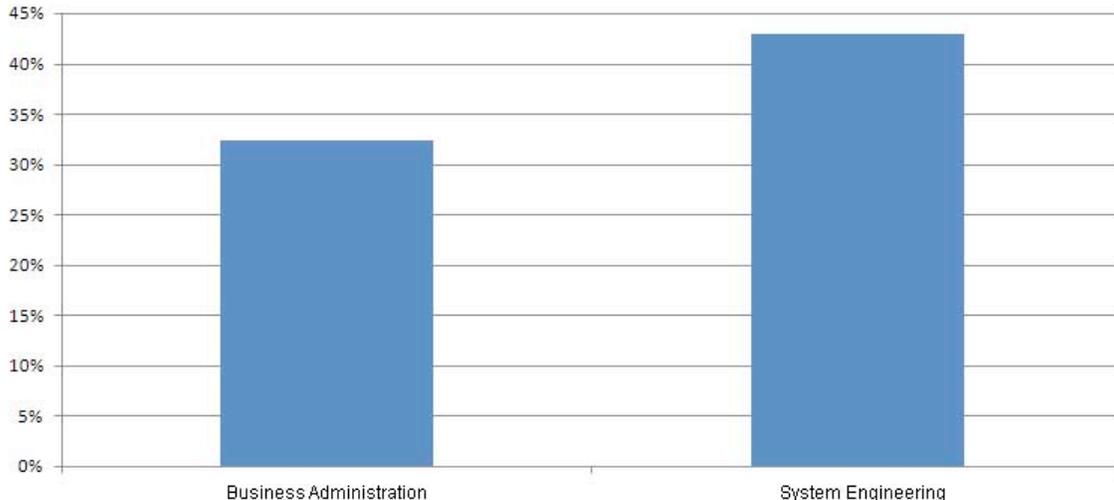
- c) Table # 3 present the dates in which the companies were created. It is important when analyzing these figures, to recognize that along the years the number of graduates had been increasing significantly (In 1984 the number of graduates was 14 and in the 2000 was about 100 students) and also that many alumni had created their companies some years after graduation.

TABLE # 3
Distribution of New Business on the Time span

	1980-1984	1985-1989	1990-1994	1995-1999	2000-2004	2005-2007
Business Administration	2.3 percent	2.3 percent	11.9 percent	21.5 percent	28.8 percent	16.2 percent
System Engineering	0 percent	0 percent	13.8 percent	13.8 percent	27.6 percent	20.7 percent

- d) Figure # 3 presents the intrapreneurial activity of our alumni. Again there are big differences among the two programs: B.A with a 32.3 percent and S.E with a 43 percent. These numbers are very good ones, because they complement the data presented about new entrepreneurs. The goal of our educational program is to produce people with a high entrepreneurial spirit which could be expressed either in the development of new business or in the development of intrapreneurial activities. Maybe the fact that many of the S.E. remains longer as employees explain the higher value of intrapreneurial activities.

Figure # 3
Intrapreneurial Activities

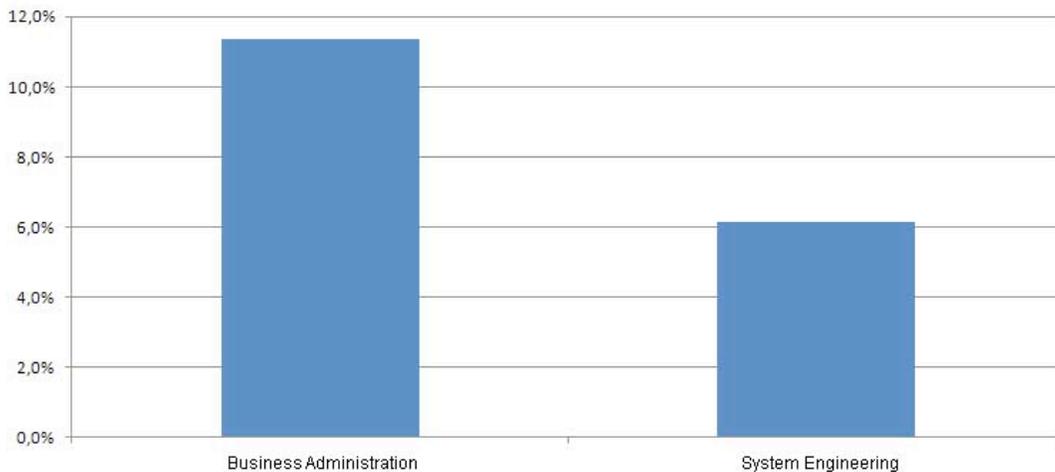


- e) Given the importance that the family business has in our economy, and that many of our students get involved in family business, it was very interesting for the research to measure the intrapreneurial activities done by our alumni in their family business. In the B.A. it was found that 9.8 percent had done intrapreneurial activities, meanwhile in the S.E. only 3 percent had been intrapreneurs in the family business.
- f) Other aspect of interest is to measure the participation of our alumni as investors in new business without participating in the management or the direction of the new enterprise. Figure # 4 shows that 11.3 percent of the B.A. alumni y 6 percent of the S.E. alumni had done investment to develop new business without active participation in the development of them.
- g) When analyzing the option of being simultaneously employee and entrepreneur, it was found that 21.3 percent of the B.A alumni and 14 percent of the S.E. alumni had been in some period of their professional life following this strategy. It's worth to mention that the

educational process that CDEE follows, provides some stimulus toward this alternative if the 100 percent entrepreneurial path can't be followed initially. It's expected that after the new business gets good results, the entrepreneur will let the employment and will be 100 percent involved in the business.

- h) The final question in the first stage of the research was related to identify the actual work situation of the alumni. As indicated in Table # 4 the proportion of alumni working 100 percent as employees in enterprises in which they do not have some ownership has decreased significantly with respect to the situation they showed immediately after graduation. For the B.A. it has come down from 85 percent, to 47 percent, and S.E. had come down from 96 percent to 70 percent. These results are very important because they confirm the basic principle that Universidad Icesi has been promoting: to form entrepreneurs for their life span and not force the young alumni to become an entrepreneur.

**Figure # 4
Investors**



**Table # 4
ACTUAL FIELD OF WORK (percent)**

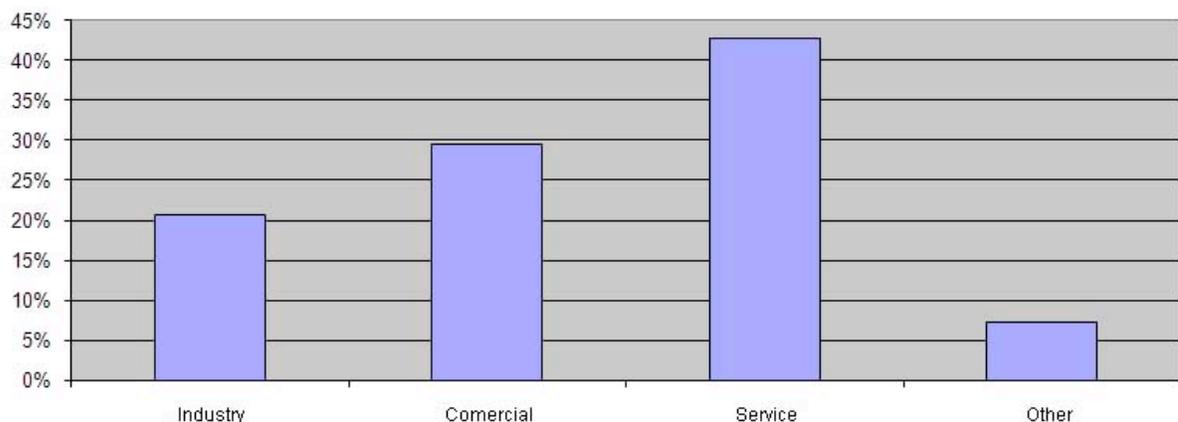
	Employee (percent)	Entrepreneur	Employee/ Entrepreneur	Employee/ Family Business	Other Activities
Business Administration	47	18	13	4	18
System Engineering	70	8	9	3	9

3.2 Second Stage

In the second stage all the interviews were done to active entrepreneurs. The main results were:

- a) Even though all of them are directly involved in their business when asked about how they perceive themselves their activity in the enterprise, it was interesting to know that 74 percent consider that their main role was owner-manager, 22 percent consider their main role as owner and just 4 percent consider their main role as manager.
- b) Figure # 5 presents the economic sector in which their enterprises are involved. A service with 43 percent is the biggest, followed by commercial with 29 percent and industrial with 21 percent. Given the academic basis of the alumni and the general trend in the economic sectors, these numbers are considered as normal for the Colombian economic situation.
- c) 85 percent of the new entrepreneurs considered that the basic idea that allow the creation of the new business was their own development, and that they were very instrumental in all the conceptualization phases of the new business. This is very important for CDEE, because it confirms the effectiveness of all the effort that CDEE has done through the years to promote the idea generation process, creativity and innovation, change orientation and the transformation model.

Figure # 5
Economic Sector



- d) When the number of partners that started the business is considered, the figures shows that in 40 percent of the cases the entrepreneur worked alone in the initial process of establishing the company. In 35 percent of the cases the entrepreneurial team has between 2 and 3 members, in 24 percent of the cases the entrepreneurial team has between 4 and 6 members, and only in 1 percent of the cases the entrepreneurial team has more than 6 members. These figures change a little bit at the present moment because in 32 percent of the companies there is still only one owner, in 38 percent for the companies the entrepreneurial team has now 2 o 3

owners, in 28 percent has between 4 and 56 owners and still only 1 percent of the companies had more than 6 owners. CDEE has to develop more activities toward networking and trust development, and also about partnership.

- e) One of the most important variables in any new business has to do with the financing of the new venture. For that reason several research questions were formulated. Figure # 6 presents the percentage that the Icesi's alumni had in the total ownership of the company, when they started. It is very interesting to observe that 44 percent had between 76 percent and 100 percent of the ownership. These figure goes along with the sizes of the entrepreneurial teams that we analyzed in a previous result
- f) As indicated, by most of the research done in financing of new business, personal savings is a source very important. In this case 85 percent of Icesi 'alumni used savings they had made as main source for the financing of their new enterprises. Figure # 7 show s the small role that venture capital, private investors (angels), governmental program had in the financing of the new business. The financial sector has a significant role not only through loans but also through the credit card system. This is one of the areas in which lots of work has to be done in Colombia to increase the role of the government in the finance of new ventures and also the development of the other financing actors specially seed capital venture capital and angel investors. CDEE will have to work heavily in the development of new sources of finance for their students.

Figure # 6
Initial Ownership

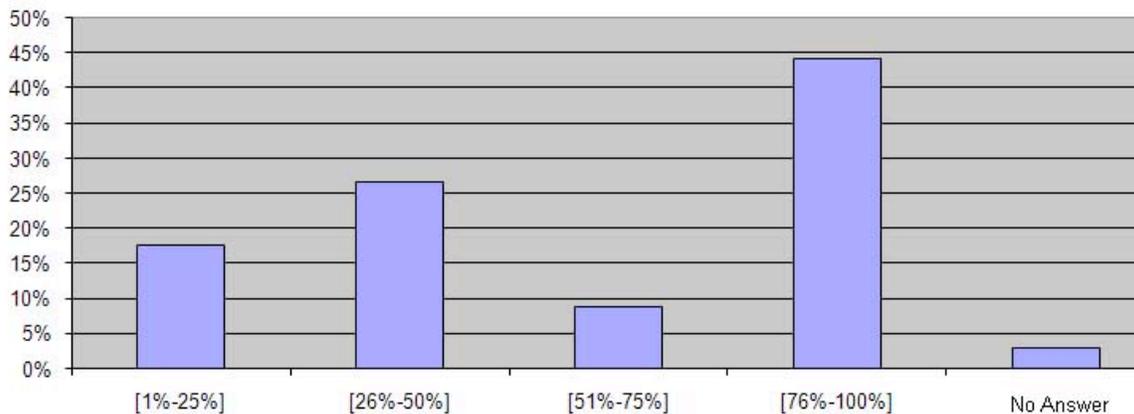
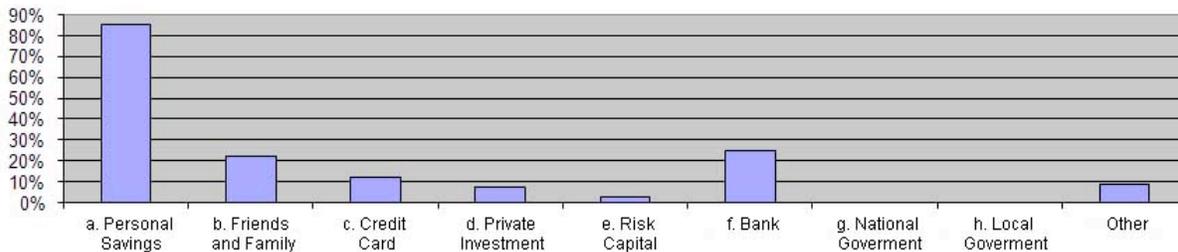


Figure # 7
Initial Financial Source



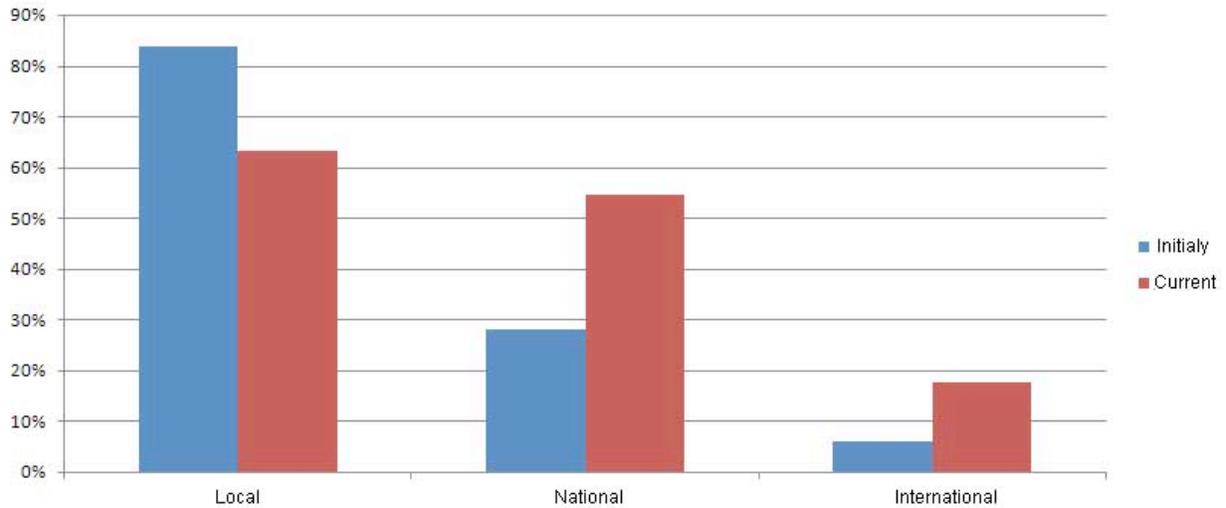
- g) Figure #8 shows how the market orientation of the business created by Icesi ‘alumni has changed through the years. Initially the businesses were very oriented to the local market (84 percent local and only 6 percent of the some export orientation) but through the years the business has increased their orientation to the total national market (54 percent) and also increased their orientation to the international market (18 percent) which is a very important trend, not only for the growth of the business but for the diversification of markets and also because it shows success of the companies.
- h) Figure # 9 shows the importance that the Icesi's alumni assign to different variables, in their decision to become entrepreneurs. It is very positive for the CDEE to find that their alumni consider the role of the Center of very high importance (53 percent), practically at the same level that family support (54 percent) and previous experiences in the job market (54 percent). It is very important to note that they do not give any significance to the government activities to promote entrepreneurship, but give some importance to the motivation that other entrepreneurs provide them.

In this subject CDEE will have to increase the training in the use of the government support, because it has been growing significantly in Colombia, and our students need to obtain resources and assistance from the government.

- i) One of the points that was of great interest for the researchers, was the measure of the potential effect that some of the specific actions that the CDEE has implemented through the years. As indicated by the figure # 10, the course in Entrepreneurship, which is a required course, was considered by 47 percent of the alumni of great importance (High) and by 76 percent of significant importance (High/Medium). The seminar in Entrepreneurship, which are extracurricular activities receive also a significant recognition by the alumni, practically at the same level that the visits and presentations done by entrepreneurs that were either in classes or in seminars or in Congresses. It was surprising for the researcher that not so high recognition was provided to Expoicesi (Entrepreneur Fair) and that the participation in new venture contest did receive in general a low importance level. CDEE will have to work very hard to develop new strategies for EXPO ICESI and for the Business Plan/ Ideas contest in

such a way that they became real learning experiences useful for the entrepreneurial life of Icesi' students.

**Figure # 8
Market Orientation**



**Figure # 9
Decision Factors**

Decision Factors

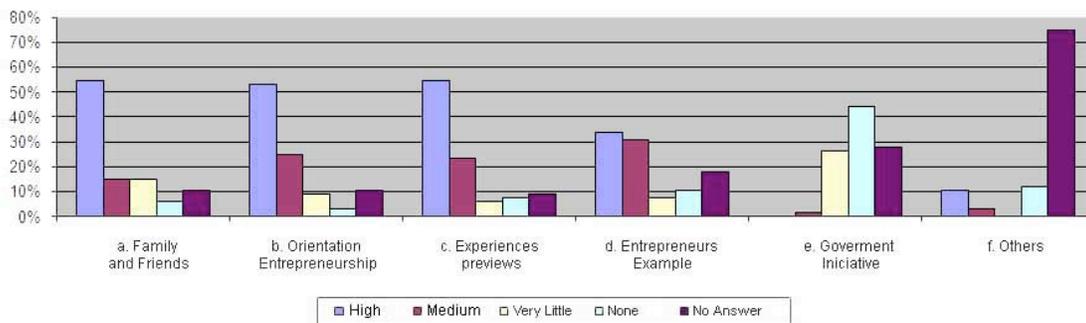
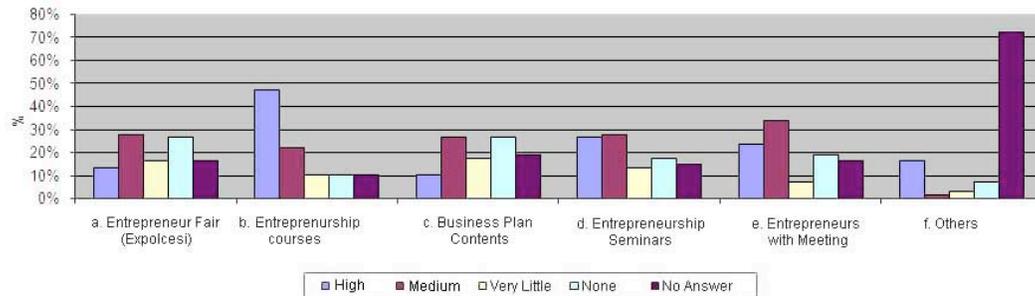
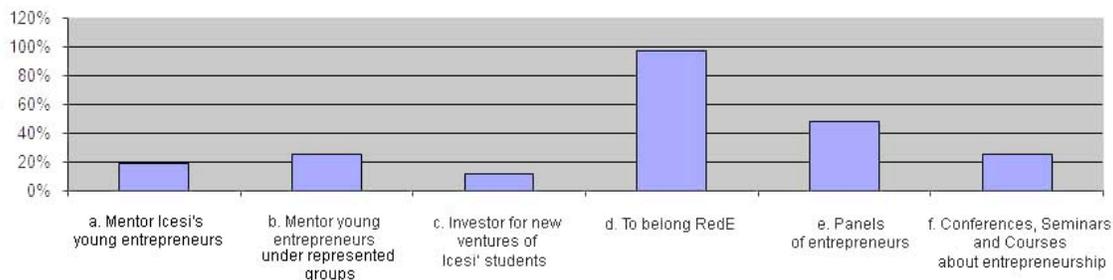


Figure #10
Formation Factors



j) Figure #11 shows the activities in which the alumni would like to help CDEE to support their mission and specially to help many Icesi' students to become entrepreneurs. CDEE has to develop new schemes to allow the alumni to help our students in the process of developing entrepreneurial competences.

Figure #11
Support Activities



4. Conclusions

a) There are significant differences among the percentages of alumni that have become entrepreneurs from each program in the university, which indicates different career paths and different orientation in their professional careers. It is well known that the entrepreneurial event is a multivariable event and that there are many other variables, in addition to the training, which will move the people to become or not an entrepreneur. However these results that had been very consistent along the different measurements that had been done, should call the attention of the academic directors of the S.E program and of the CDEE to consider ways to improve their turn over. In the B.A program a very significant curricular change was done about five years ago in the entrepreneurship area, when an educational model based on entrepreneurial competences was implemented with five required courses and opportunities for internship and for final project in new business

development. The effect of these changes will be measurable maybe in the measurement of 2014, but the curricular design has been showing some very fruitful results along its implementation.

- b) It is clear that the entrepreneurship option is a very important one for the alumni, and that in the long run many of them will develop their business. Thus it is very important that the Latin American universities that still do not include in their curricula the entrepreneurial orientation start considering additional ways for providing their student the tools that they are going to need to work along their professional career.
- c) The effect of the Entrepreneurship courses and extracurricular activities done through they all by the CDEE are well recognized by the alumni, as factors that support their decision to start and to succeed with their enterprise. This fact really validates the effort done by the university supporting CDEE's programs.
- d) It is necessary to develop more efforts in several areas to increase the proportion of entrepreneurs: Financial facilities, closer contact among students-entrepreneurs, improvements in the development of business opportunities, mentoring in the development of the business Plan and in the start-up phase, the development of entrepreneurial networks, the offering of management consultancy in the different topics that the new business requires.

The CDEE has promoted in the last year, two initiatives to try to solve some of previous weakness: The Start-Upcafe, which is a place for the development of the business opportunity, the business plan and the starting of the new business, was established in March 2008, and actually has around 112 students trying to develop their projects. In the start Upcafe they have space, computers, information center, mentoring and consulting. It is a very special and nice area that the CDEE has adequate for the potential new entrepreneurs.

CDEE has also helped the alumni entrepreneurs to develop the Icesi's entrepreneur network (RedE), which was established in 2009 and is starting to develop projects to integrate and help all the Icesi's entrepreneurs, developing business among themselves, alliances for new business, connections, investment opportunities and also support for Icesi's students who are actually at the Start-Upcafé.

- e) The family and friends support was a very important factor in the decision to become entrepreneurs, which indicates the need for more intensive actions in family managed business, in the development of entrepreneurial families and in the development of networks with other groups of stakeholders which could be important for Icesi's entrepreneurs. A new research line in entrepreneurial families' development is just starting.
- f) It is important to reinforce the role of the entrepreneurship courses in all the academic programs. CDEE need develop many new approaches to improve the development of the entrepreneurial competences among their students. Here the new academic designs, the use

of new of methodologies (Entrepreneurial Contest, e –learning support, courses based on entrepreneurial competences, Entrepreneurship for technology based business, etc) should prove in the following years its value as the old one had been shown its value in the measurements that had been made.

- g) It's very important to develop some activities as agreements with the financing sector in Colombia, to make easier the access of our students to resources to start their business.
- h) New elements should be considered in the daily work of CDEE to provide more support to our students. Initially CDEE is planning to develop a group of consultants (professors, alumni, professional consultants) associated to the Start-Upcafe to provide services on demand from the students who are affiliated it.
- i) The development of better support systems for the Business Plan/Ideas/Opportunity Contest is a real need, in order to get our students closer to these learning, networking and financing experiences.
- j) A deeper contact and cooperation with the governmental programs to promote entrepreneurship is required because our students and alumni are not using the support system that the Colombian government has. It was not significant ten years ago, but, it's important today.
- k) CDEE should start a new measure to include the alumni from 1984 to 2004, and in this case many of the new programs will start to show its results.
- l) It will be nice that other universities and programs in Latin American do measurements like this one to have some corporative figures, and to identify the effect of their strategies in the results.

5. Bibliography

- Varela R., Jimenez J.E., (2001) "The effect of Entrepreneurship Education in the Universities of Cali", *Proceeding 2001 Babson/Kauffman Entrepreneurship Research Conference, Frontiers of Entrepreneurship Research 2001*, Jonkoping, Sweden.
- Jimenez J.E, Varela R, (2001) "El Espíritu Empresarial en tres Universidades de Cali", *Informe final de Investigación*, Universidad Icesi, Cali.
- Varela Villegas Rodrigo, "Innovación Empresarial: Arte y Ciencia en la Creación de Empresas", Pearson Educación Latinoamericana, Bogotá 2008.
- Varela V. Rodrigo, (2003) "La Cultura Empresarial como Estrategia de Desarrollo para América Latina", en Veciana J.M. "*Creación de Empresas Entrepreneurship*" Universidad Autónoma de Barcelona, Barcelona.

- Varela R., Bedoya O.L., (2005) “Entrepreneurship Development Model Based in Competences”, *4a Conferencia de Investigación en Entrepreneurship – CIELA 2005*, Cali, Colombia.
- Varela R., Bedoya O.L., (2006) “The Development of Entrepreneurs based upon Entrepreneurial Competences the Jóvenes con Empresa project”, *BALAS Conference*, Lima, Perú; *International Conference Entrepreneurship in United Europe-Challenges and Opportunities*, Bulgarian Association for Management Development and Entrepreneurship, Bulgaria; *CLADEA Conference 2006: Latin American & European Union, Opportunities and Challenges*, Montpellier.
- Varela R., (2007) “Experiences and Developments at the “Jóvenes con Empresa” Program”, *ICSB World Conference 2007*, Turku, Finland.
- Varela R., Otero A.F., (2008) “El Startup-Café en la Universidad Icesi: Un ambiente para promover el desarrollo y el arranque de nuevas empresas de base tecnológica”, *XIX Congreso Latinoamericano sobre Espíritu Empresarial*, Florianópolis, Brasil.

Dynamics of Firm Internationalization through a Capability-based Evolutionary Lens

by *Utz Dornberger and Noor Un Nabi Md.*

Growing parallel discussion of 'born global' and 'born-again-global' has necessitated a renewed discussion of two fundamental questions e.g. i). what enable firms to get into international market and ii). what enable firms to spread their existing international market. This paper focuses on answering these questions by proposing a model of firm internationalization from an evolutionary-capability perspective. It explains international expansion as a capability-driven process. State and the art of internationalization depend on development of certain capabilities in the firm. Composition of capabilities in interaction with the environmental settings determines whether the firm will enter into international market. The model proposes that international entry-level capabilities and the capabilities for expansion in the international market are not necessarily similar. Expansion level capabilities are more complex than entry-level capabilities. A qualitative study has been done with four Bangladeshi pharmaceutical firms who are recently in international expansion. The outcome of the investigation has confirmed the pattern of internationalization as argued in the theoretical model.

Introduction

Goldman Sachs (2003), in its economic paper relating to projection of BRIC (Brazil, Russia, India and China) economies beyond 2050, showed that based on the forecasting of the GDP, productivity, per capita income, purchasing capacity and currency appreciation rate forecasted that they would overtake G6 (USA, Japan, Germany, UK, France and Italy) by 2040. Euromonitor International (2009) again forecasts that emerging and developing countries' GDP is set to overtake advanced countries' by 2013. It also comments that due to heavy reliance on financial sectors which are passing through 'financial crisis' is going to affect the advanced countries' economies more than the emerging countries'.

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* Interviews and discussions with the executives of the four firms took place in the first week of March 2008 in Bangladesh. We thank all of them for their cooperation. We particularly thank Mr. Mahbubul Karim, Manager (Commercial Planning), Incepta Pharmaceutical Limited, Bangladesh for his personal generous initiatives to introduce with the other managers interviewed.

The emerging countries which are not only exporting products (e.g. Russia) but also have large domestic consumption base and young population (e.g. Brazil and India) are to be less likely affected by this crisis. This characteristic and geographical change in international economic landscape is being reflected in international business traffics with its changing participants' profiles and directions.

Despite the differences in their growth and development strategies, the emerging countries have made their impressions not only as the destinations of FDI but also as the exporters of capital (outward FDI), commodities and services (Deutsche Bank Research Report, 2008). Multinational companies are emerging out of countries like Brazil, China, Mexico, India and South-Africa which are quite nonconventional home ground of multinationals. These emerging country multinationals have grown in two phases as 'trade expansion (i.e. export)' and investment expansion (i.e. FDI) phases (Deutsche Bank Research Report, 2007). Once home brands like TATA and Haier are now representing international brands and conglomerates. Such developments have drawn attentions of academia too, as Mathew (2006) researches the international growth of east-Asian firms and terms them as 'dragon multinationals', 'Made in China' (Breslin, 1998) and 'Made in India' (Ramamurthi, 2008) have been focus areas of research concerning export-led growth and internationalization.

Not only the BRIC firms are in the changed game, Jansson (2007) points out that a 'third wave of internationalization' is on unfolding where previously mature domestic firms of Western countries are going into the emerging markets like BRIC. Jansson (2005) notes that this wave contains both 'pull (in terms of extended access to market and resources)' and 'push (as BRIC firms are coming into EU market)' elements which are not only applicable to large firms but also to 'small and medium enterprise (SME)'. Jansson and Sandberg (2008) note that under this context more SMEs are going for internationalization, although internationalization process has been more complex.

Traditionally MNCs received more attention in research on internationalization than SME, as SMEs are thought to be inherently disadvantageous due to their lack of resources and capabilities (Coviello and Munro, 1997; Meyer and Skak, 2002; Jansson, 2007). The changes perspective calls for renewed research in internationalization process of SME. This paper is devoted to answer two fundamental questions related to internationalization

- i.) What enables firms to enter into international market and
- ii.) What enables firms to spread into international market?

This paper initially proposed an integrative model of internationalization combining proposition from 'evolutionary economics' and 'resource-based view (RBV)'. In the later part this paper four Bangladeshi company cases have been discussed in light of the proposed model.

Do you need yet another model for firm internationalization?

Since the advent of the new century, firm internationalization process has been viewed from two alternative perspectives namely incremental internationalization and born global. Growth of BRIC as the players of the central stage of the economy, have put these two alternative approaches on a cross road.

Johanson and Vahlne (1977)'s Uppsala model (incremental internationalization) described the 'state' and 'change' aspects in internationalization process. Their view captures the inherent dynamics of internationalization process, which operates as the relationship between 'market knowledge' and 'resource commitment'. They concluded that firm's level of engagement in

international market vis a vis level of resources commitment in international operation is a positive function of firm's 'market knowledge', which typically follows an incremental pattern of internationalization starting with exporter who has substantial position in domestic market.

Rennie (1993), in McKinsey and Co report on Australian exporters, pointed out to a group of high-technology based small firms who started exporting quite as early as their inception unlikely to the conventional exporters. Oviatt and McDougall (1994) , in their typological description of firms' internationalization process based on its rapidity and path dependency, described 'Global start-ups' which are alike to Rennie (1993)'s description. This observation drew substantial attention in academia, as Cavusgil (1994) comments that incremental internationalization is dead.

Madsen and Servais (1997) pointed out that though born-global firms (BGs) looks like pop ups, they are the resultants of the same certain contextual and personal states e.g. new market conditions, new technologies and more and elaborate capabilities of the founders, entrepreneurs and managers. They marked it as an open question that when these contextual and personal states are subjects to the process of emergence, does the phenomenon based explanation of born-global is theoretically sustainable? Hashai and Almor (2004) have come up with an interesting finding that the traditional BGs (KIBS) follow an incremental process in their internationalization too, where they first export via agents in physically close markets, next they own marketing subsidiaries in foreign countries keeping all value adding activities in home country, finally internationalize R&D and production by the way of mergers and acquisitions and they expand to physically distant markets. This observation again put born global's validity as a self-sufficient theory.

Bell, McNaughton and Young (2001) put BG in other way round by putting the idea of 'Born Again Global', where they indicated a phenomenon that a group of firms started out as purely domestic firms and are established in the domestic market, are embarking to the road of internationalization quite aggressively and successfully.

None of the extant theories and empirical findings accommodate the new realities fully (Axinn and Matthyssen, 2002), as they started from any specific point and finished in another, which gives a cross-section view of the phenomenon. There is a need for reframing internationalization theoretical modeling, which will accommodate the whole dynamism of firm's graduation and expansion in international arena. Axinn and Matthyssen (2002) further notes that new model should neither be bound by how firms choose forms and linkages to enter into international market, nor only by the concept of 'firm', rather it should be endowed with flexibility to explain and predict firm's evolution to conduct global business.

Johanson and Vahlne (1990) suggested to 'renovate' or 'dynamise' process model with insertion of elements of RBV. Andersen (1997) also suggested that organizational capabilities perspective can be put into the most promising framework of process school (Melin, 1992). Axinn and Matthyssen (2002) welcomed dynamic modeling, whether it's adaptation or innovation, with consideration for environmental factors.

Investigating how firms get strengths for entering the international market and in the further stage how these similar firms progress into international market, needs a dynamic model which will tap firm's evolution towards international market as manger supervises firm-environment interaction process. Explaining such dynamics requires the integration of a number of components, which don't necessarily belong to a particular theoretical school, and it is particularly true for explaining internationalization decisions and trajectories of the firms (Bürgel, Fier, Licht and Murray, 2004). Adaptation and integration of theoretical propositions from different schools are necessary.

Proposition for an evolutionary and capability-based model of firm internationalization

Penrose (1959) puts forward that firms grow internally by the process of learning-by doing by the managers, as managers learn to configure and utilize firms' resources in a value creating way. Penrosian view emphasizes the focused role of the managers e.g. managers as resources developers, resource deployers and controllers and above all managerial experiences and talents as the core driver for the growth. Firm decides upon the direction of a growth by examining the strengths and weaknesses of its resource base (Barney, 1986). Firm's context is important in explaining its growth. This contextual dynamics severely restricts the strengths of static growth analyses. Dynamics of formation, survival and growth has been the central point in evolutionary economics, which has hugely impacted the discussion of industrial organization (Coad, 2007).

Alchian (1950) argues that the evolutionary mechanism of selection keeps economy on the path of moving on and up, as the fitter firms survive and grow while less viable firms lose market share and exit. This principle of 'growth and survival of fitter' served as the foundation for theoretical model building by the further influential proponents e.g. Nelson and Winter (1982).

Hodgson and Knudsen (2006) argue that any system that complies with variation-inheritance-selection framework is subjected to Darwinian evolution. They pitch this evolutionary mechanism as 'domain less', i.e. it can be equally present in a biological or economic system in spite of that they are different in nature. This proposition is widely known as 'general Darwinism' (Ibid.). Witt (1997) and Foster (1997) describe 'self-organizing' approach emphasizing the endogenous tendency for acquired knowledge and skills for the expansion in economic organization and complexity (Hodgson, 2002). Witt emphasizes on human intentionality for selection. Natural selection in the evolution of an economic system is not possible as anything with the exact properties of biological gene is not a feasible idea for economic organization (Witt, 1999). For the evolution of economic organization cultural knowledge plays the most crucial role (Witt, 2004)¹. Penrose (1959), in describing organic growth of firms, also emphasized the role human intentionality in selection of technology and routines. Firm growth is of course an evolutionary process, where human intentionality, intelligence and learning process play more dominant role in the selection process.

Internationalization is a process concerning adaptation of firm's operations, offers and resources to international environment (Calof and Beamish, 1995). While the point of variation concerned to internationalization is from firm's internal process perspective, internationalization process is related to 'adaptation' and 'exploration' (Cattani and Tschoegl, 2002). Adaptation is firm's behaviour of seeking opportunities in a similar environmental setting where the focal firm currently belongs to. Exploration is searching beyond the local optima (March, 1991; Levinthal, 1997) with prior justifications (Lamoureaux, 2001). Cattani and Tschoegl (2002) describe that external process includes 'selection', 'extinction' and 'generation'. Selection involves a systematic process, while extinction and generation is random (Ridley, 1996). Selection and extinction trim the variation that the internal processes generate, while generation provides new opportunities to which the firm may respond via adaptation or exploration (Cattani and Tschoegl, 2002).

The proposed model fundamentally stands on the premise that firm's first time getting into and further spreading into international market is the resultant of firm's evolution in terms of its capabilities. The model takes 'export' as the mean of first time international market entry

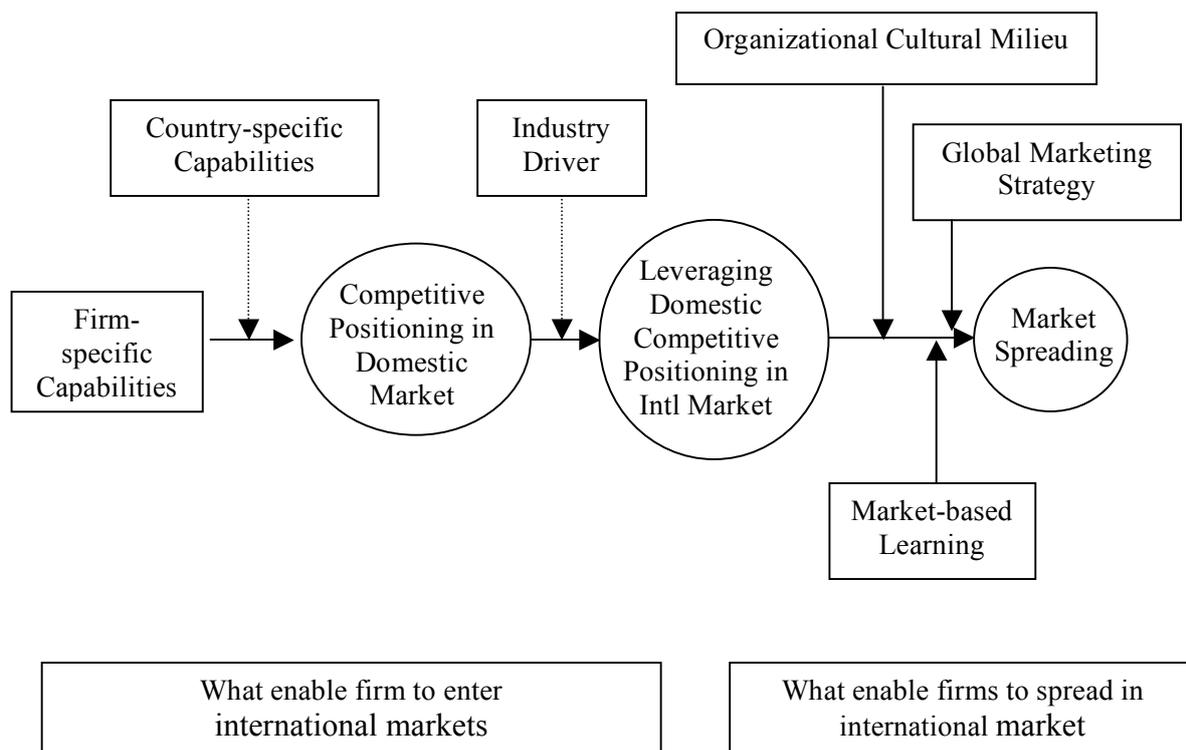
¹ Witt's view is prominently known as continuity hypothesis.

and ‘adding newer country market on export list’ as ‘spreading further’ in international market. This model captures the pathway of firm’s graduation from ‘any company’ in the home market to a company substantially propagated in different country markets with the philosophical indebtedness to ‘incremental process models’ of internationalization. The model assumes that firm’s capabilities (resources in the most functional aspects) are the drivers in this pathway. The model also assumes that no universal set of capabilities drive firm through this pathway, rather firms might need different sets of capabilities (or remoulding of the existing capabilities, which are in no way reproduction of the original set) in different turns of this pathway. Capability obsession of this model strongly ties it with RBV school. Such assumptions responses to the recent call of Barney et. al (2001), in the review of 10 years of RBV, to explore organizational resource and capability dynamics as an extension to resource-based explanation of the marketing dimensions and process (Srivastava, Fahey and Christensen, 2001).

The model

The proposed model starts with that the firms develop capabilities through competition being under a given set up. Firms start with a certain set of endowed resources (as envisioned as ‘genetic knowledge’ by Witt) and produced resources. Resources among the firms contain a natural amount of heterogeneity which gets translated to heterogeneous capabilities of the firms (later on ‘firm-specific capabilities’- FSC). Rugman (1981) and Rugman and Verbeke (2003) define ‘firm-specific advantage (FSA)’ as the unique capability proprietary to the organization which could be product, process, technology, marketing and distribution skills. This research defines FSC in terms of firm’s capabilities demonstrated in how the firm is doing its functional level jobs (Grant, 1991). RBV rests on the basic assumption that resources deployed in unique way to produce higher rent for the firm (Penrose, 1959). The act of deploying resources in a unique way is a capability itself, at the same time uniquely deployed resources produce distinct functional capability for the firms.

Figure 1. Evolutionary capability-based model of internationalization



Firms compete with each other, under a given rule of competition, on the basis of their heterogeneous FSC in order to attain 'competitive advantage over each other in home market' (later on described as 'CA'). This domestic competition generally contributes to strengthening firm's value producing and commercial skills (Grant, Jammine and Thomas, 1988; Porter, 1990). Wan and Hoskisson (2003) find that competition in domestic market increases the probability of successful internationalization.

Resources are context specific. Firms belong to a given locational environment consists of rules and institutions. This environment, as a whole, can be envisaged in terms of certain set of capabilities (later on described as 'country-specific capabilities' CSC). Wan (2005) describes CSC as country's resource context including factors and institutions which provides firms with resources for conducting transformational and transactional activities. RBV distances itself from environment and strategy dynamics of competitive advantage explanation, rather it takes an in-side-out approach that firm's heterogeneity in resource possession and deployment generate competitive advantage. Ghertman and Hadida (2006) put forward a question that whether firms belonging to the same industry but operating in different institutional set ups develop similar or divergent set of strategic assets to attain competitive advantage, and at the same time they answer that asset endowment and competitive advantage of the firm might not be fully understood without reference to its institutional environment. CSC are open to all firms in the similar manner. But firms' in the way of interaction with local environment should be heterogeneous due to asymmetric distribution of managerial talents and experience (Witt's 'cultural knowledge') among the firms. It's a distinct competency of the firms to absorb CSCs in their favorable ways. This absorbed CSC turns into FSC in the operational level. CSCs are non-firm specific, but they contain general potentials for firm-specific CA generation. Their impact on firm-specific CA generation is of 'moderating' in nature and of course non-linear. CSC casts an influence in determining the strength of relationship between FSC and CA in home market. Here, this model has integrated 'Porter's left over'² with RBV to explain generation of competitive advantage from evolutionary perspective.

The proposed model progress in the next phase by drawing on Johnson and Vahlne (1977) classic and their followers that firm's with consolidated positions in home market think for international expansion. Firms with superior competitive position in home market are more prepared to enter into international market. But this condition is sufficient alone for the firm to enter into international market. International entry should provide the firm sufficient amount of incentive (may be operational or strategic, or combined in certain interval horizon). Such incentives are complex products of both home and foreign contexts of the focal firm. These incentives are also products of facts and managerial perceptions. Export literature described both resources and information, external and internal to firm, capable of triggering internationalization process as 'stimuli' (Maisenbock, 1988; Katsikeas, 1996; Leonidou, 1995 and 1998). They define 'external export stimuli' as the products of firm's environment. Elango (1988), based on Yip (1989), defines industry drivers (ID) with particular reference to firm's internationalization as the external forces action prevalent in firm's external environment which might influence firm's international entry and growth. This model assumes that firm's international entry decision is influenced by the favorable position of ID. Position of ID is not sufficient enough to trigger internationalization; it must be combined with firm-specific capability clause. In analytical sense, this model assumes

² Porter (1990) recognized the role of government and policies but not included due to their bi-polar nature of effect on competitive advantage generation. From evolutionary perspective, evolution can not be perceived without counting on environmental setting.

that ID influences the relationship between CA and its internationalization (first time international entry). Influence of ID in this respect is ‘moderating influence’. Inclusion of ID in this model inserts the ‘environmental factor’ into ‘incremental process models’. Recognition of moderating impact of environmental factor loudly confirms the compliance of evolutionary principles of interaction and selection.

The proposed model viewed internationalization in its simplest form e.g. normal export. Initial entry in international market can be reactive e.g. experiment or accident (Li and Cavusgil, 1995). Incremental process models of internationalization mainly attributed ‘psychic distance’ as the source of such reactivity. It’s argued that easier access to information has substantially led to shrink psychic gap substantially, particularly from cultural aspects. Still differing natures and qualities of institutions and institutional services make the newly internationalizing firms to be more cautious in investing in internationalization efforts at the beginning. They rely on ‘experiential knowledge’ dominant resources commitment decision at least for a certain time until they have fair amount of understanding of their new business and trust on their newly found partners. The proposed model assumes that in the early level of internationalization (export in this model) a firm just replicates (leverages) its domestic capabilities in the international market. Such replication is important from evolutionary perspective, as the firm gets its capabilities tested against new environment. The feedbacks from such replication facilitate the firm to adapt its original set of capabilities or develop a new set for better positioning in international market in sustainable manner.

Knudsen and Madsen (2002) propose that continuing export is the demonstration of the dynamic capability perspective of the firm, firms accumulate knowledge, develop strategy, and deploy resources depending on its stock of knowledge which is conditioned by emergence of novelty and emergence of novelty never comes to rest (Nelson and Winter, 1982; Hodgson, 1993; Veblen, 1994; Hamilton, 1999). Firm capabilities evolve over time due to endogenous changes responding to market and exogenous shocks, such evolution dislodges or adds to the yields of firm’s existing capabilities and thereby influences firm’s competitive position (Athreye, Kale and Ramani, 2008). Teece, Pisano and Shuen (1997) comment ‘competitive advantage is not just a function of how one plays the game; it is also a function of the assets that one has to play with and how these assets can be deployed and re-deployed in a changing market (p.529)’. Morgan and Katsikeas (1997) suggest that in real export phase (export expansion) firms develop various mechanisms, skills, and competencies to accommodate the challenges of international competitive structures. These competencies are mainly for expanding the current sphere of activity and performances under a certain resources and technological conditions i.e. contractual competition (Hannes and Fjeldstad, 2000), where resources or capability requirement is not similar to operational competition stage, where contractual competition demands for more intangible resources (Ibid.). This can be concluded that sources of dynamic or higher-order capabilities include complex intangible resources.

The proposed model assumes that firm’s capabilities at the initial phase of its internationalization should necessarily not be equally important in the later phase, where the firm proactively engages itself in expanding its international market. This model describes this phase as ‘market spreading’ in reference to increasing number of foreign country market. International expansion offers new opportunities for the firm to squeeze more returns from current resources and builds new capabilities (Luo, 2000). While firm looks for spreading its international market, it gets itself exposed to variety of institutions, rules and

cultures. It can be described as ‘psychic complexity’, which the firm has to manage efficiently to keep its expansion on. Capability to handle such environmental complexities will guide the operationalization (might be again through replication, adaptation or installation of completely) of firm’s fundamental functional capabilities. This model assumes ‘pre-expansion’ FSCs as firm’s fundamental functional capabilities, while these capabilities were originally developed for home market in home context. Capabilities relating to address such ‘psychic complexity’ are expected not be ‘too much specific’ rather a composed of more flexible properties so that they can be applied to different context. Impacts of such capabilities are felt on the fundamental functional capabilities of the firm with a general sense of purpose.

The proposed model assumes that such set of higher order capabilities could include ‘organizational cultural milieu (OCM)’, ‘market-based learning (MBL)’ and ‘marketing program (MP)’.

Hooley, Fahy, Cox, Beracs, Fonfara and Snoj (1999) presented a hierarchy of marketing capabilities, based on previous works of Webster (1992) and Day (1994), suggesting that marketing operations is subordinated to marketing culture and marketing strategy. Pettigrew (1990) defines organizational cultural as the complex set of values, assumptions, and belief which defines the ways in which a firm runs its operation. Moran and Volkwein (1992) suggest that organizational climate consists of attitudes and values alone, whereas culture exists as a collection of basic assumptions, in addition to attitudes and values. This research adopts the idea of ‘cultural climate’ to conceptualize OCM. Denison (1996), on his conclusion on reviewing the influential 1970s literatures relating to organizational climate, has commented that organizational climate includes multiple perceptual measurements of organizational attributes and the multiple perceptual measurement of organizational attributes combining perceptual and more objective measurements.

Morgan (2004) defines MBL as an organizational learning framework combining organizational learning values, capabilities, processes and behaviours focused on facilitating the dynamic fit between organization and its marketplace environment. Capability is woven in the strategy (Scheurer, 2005) and demonstrated through skillful execution of specific activities (Grant, 1991). Marketing strategy is the pattern of deployment of resources (capabilities) in the business unit level with a view to achieve predefined marketing objectives in the target market (Varadarajan and Clerk, 1994). A marketing strategy is considered as ‘standardized’ when a common product, price, distribution and promotion programme is offered on a worldwide base (Jain, 1989), where as the marketing program is the functional demonstration of a marketing strategy. Simonin (2004) defines standardized marketing program as the pursuit of similar marketing programs across different countries or regions with regard to product offering, promotional mix, and price and distribution structure.

In this model OCM has been perceived as the composition of ‘entrepreneurial orientation (EO)’ and ‘Global mindset of the managers (GM)’. MBL has been perceived as the externally (market) focused dual looped proactive learning mechanism. MP is perceived on the basis of more coordinated and pointed market servicing initiatives. The proposed model assumes that these three capabilities can deliver required impetus and fine tuning to the fundamental functional capabilities of the firm to exploit international market spreading opportunities. Such an approach is quite provoking both from firms’ evolution perspective and resource perspectives, while firm develops a new and more complex set of capabilities

in response to newly emerged environmental complexities and diversifying its resources base by emphasizing more on organic resources.

Empirical investigation

Pharmaceutical industry in Bangladesh

Traditionally modern allopathic human drug used to be imported in this region from developed countries till the withdrawal of British colonial rule, whatever produced locally was done by Transnational Corporations (TNC) with non-significant role of local firms (Taher, 2006). From post-colonial to pre-independence period, 1948 – 1971, pharmaceutical market of this region used to be dominated by imported drugs and TNC's production subsidiaries, where the role of locally owned firms was both technologically and commercially insignificant, and this situation continued even in early 1980s (Begum, 2007). In 1981-1982 period, 122 companies exported human drugs to Bangladesh from 23 countries including 29 UK, 12 USA, 10 Swiss, 9 German, 10 Indian companies (Chowdhury, 1995). Finally on 11th June 1982, the law was promulgated by 'Ministry of Law and Land Reforms (Law and Parliamentary Division)' to control manufacture, import, distribution, and sale of drugs in Bangladesh, with an official nomenclature of 'The Drugs Ordinance (Control) 1982'. Of the 1746 drugs, expert committee indentified as harmful, inappropriately formulated, or therapeutically ineffective, 176 were produced by TNCs, 617 were imported, and 994 were produced by 156 local manufacturers. The Drugs Ordinance 1982 has been successful to realize the radical objectives it proposed (e.g. ensuring quality essential drugs in affordable price and putting limits on unfair practices of TNCs) and laid down the foundation for a modern pharmaceutical industry in Bangladesh which is now an issue of discussion in international arena (Reich, 1994). Since then, Bangladesh's pharmaceutical industry has been successful to meet the demand of medication for the huge home population. Local firms are the producers of generic drugs in their own brand name. There are 237 licensed drug manufacturers in Bangladesh and among them 150 are in operation (DDA, 2007)³, while 138 are registered member of 'Bangladesh Association of Pharmaceutical Industries (BAPI, 2007)⁴. This industry employs 65000 skilled people directly, and 15000 unskilled people in indirect manner (Lincoln and Bhattacharjee, 2007). Nowadays local producers supply 97% of the yearly domestic demand for human drugs and the rest 3% imported includes only high-tech therapeutic drugs (Faroque, 2006). While import of finished drug decreased, import of raw materials and packaging materials for pharmaceutical production increased to meet the growing demand of manufacturing in the local level. There are about 450 generics registered in Bangladesh. Out of these 450 generics, 117 are in the controlled category i.e. in the essential drug list. The remaining 333 generics are in the decontrolled category, The total number of brands /items that are registered in Bangladesh is currently estimated to be 5,300, while the total number of dosage forms and strengths are 8,300 (Sarker, 2006). Local firms started to get into export venture systematically as a serious business option since 1992 (Lincoln and Bhattacharjee, 2007). Bangladesh mainly exports generic finished formulations and bulk drugs, where as it exports API (Active Pharmaceutical Ingredients) much less than it imports (Ibid). It mainly exports to 'moderately regulated markets' i.e. where certification and registration rules are not as stringent as in 'highly regulated market' e.g. USA, Canada, UK, Japan, Germany, France, Italy, and EU, and 'non-regulated markets' i.e. where regulatory requirements are minimum

³ Professor Habibur Rahman, Director, Directorate Drug Administration (DDA) Bangladesh revealed in a press conference in Dhaka on 11. 04. 2007.

⁴ Information collected from 'Bangladesh Association of Pharmaceutical Industries (BAPI)'

(Chowdhury, 2006). Bangladeshi pharmaceutical products are exported to as many as 69 countries of Asia, Africa, North America, South America, and Europe including Russia, Ukraine, Malaysia, Tanzania, Vietnam, Philippines, Germany, Sweden, USA, Netherlands, and Brazil to name a few.

The four cases from Bangladesh

Square Pharmaceutical Ltd. (SPL)

SPL started its operation in 1958 as a partnership of three local entrepreneurs. SPL was among the very few locally owned pharmaceutical drug producers in Bangladesh market in that time, while the market was dominated by the TNCs. SPL entered into technical collaboration with Janssen Pharmaceutical – Belgium (a subsidiary of Johnson & Johnson USA) in 1975 and with F. Hoffman-La Roche - Switzerland in 1984. SPL invested heavily on technical, manufacturing and management capability building to position itself in the new market scenario due to the enactment of ‘Drug Control Ordinance 1982’ which strictly redefined the operational areas for the TNCs. SPL was the first national company to attain the market leadership in the local market in terms of annual sales volume in 1985. Since 1985, SPL has been maintaining this position. In 2007-08 financial years, SPL’s gross turnover was 9566 million Tk⁵. with an annual growth of 26.6 percent. Since 2003, SPL has been maintaining more than 15 percent annual growth rate on an average. Continuous renewal and extension of capabilities is at the core of SPL’s management and strategic planning. SPL had listed itself with the ‘Dhaka Stock Exchange (DSE)’ as a ‘public limited company’ in 1995. In 1996, SPL upgraded its technical capability with the assistance of Bovis Tanvec Ltd. UK. In 2005, SPL has acquired a state-of-the art antibiotic (Cephalosporin) production with assistance from Telstar SA Spain. Employment size in SPL was 3564 in 2007.

SPL manufactures pharmaceutical finished products, formulations and basic chemicals. SPL is among the pioneers to bring new and high-tech drugs in different disease and therapeutic classes in the local market. Till the first quarter of 2007, SPL had 497 offers in the market in different therapeutics, molecular and dosage form. In the first quarter of 2008, this offer size increased to 532 i.e. it has brought 35 new offers in this interval. Quality assurance of the drugs is the most important concern of SPL. Apart from WHO GMP, SPL obtained ISO 9000-1 certification in 1998. In 2007, SPL obtained ‘Medicines and Healthcare Products Regulatory Agency (MHRA) – United Kingdom’ compliance certification as the recognition of maintaining world class quality of its products. In 2008, SPL has once again invested 30.42 million Tk. to upgrade its quality control laboratory.

SPL has been engaged in exporting since 1987. The continuous capability extensions are pushing SPL to look beyond the horizon as a part of its regular growth options. In 2009, SPL has been exporting its products to 32 country markets, while exporting to another 22 country market are under processing phases e.g. obtaining quality, safety and administrative clearances from the importing nations. SPL has been proactively and aggressively looking forward to expand its market into European main markets. SPL has registered its own distribution subsidiary in London in 2007. SPL has committed resources to increase its presence in international market in different other forms. Since 2004, SPL has its production and distribution facilities in Vietnam under a licensing agreement with the local Vietnamese firm ROVIPHARM. During 2007-2008, SPL exported 212.49 million Tk., which is 10.13

⁵ National currency of Bangladesh – Taka (Tk.). 1€ = 89.75 Tk. 1 US\$ = 68.75 Tk. (28.04.2009)

percent higher than the previous year's. SPL is also a listed pharmaceutical drug supplier for the international agencies including WHO and UNICEF. SPL is engaged in 'toll manufacturing' for some of the European firms and is in the process of buying the licenses of the European manufacturers. SPL hopes that successful execution of these initiatives will expedite its efforts to enter into international market more intensively and in more diverse manner.

Beximco Pharmaceutical Ltd. (BPL)

Though BPL had been registered as a pharmaceutical manufacturing and marketing unit by the local entrepreneur in 1976, it started its production and marketing as the licensee of the products of Bayer AG Germany and Upjohn Inc. USA in 1980. BPL started production and marketing of its own brands in 1985. BPL has the second position in national market in terms of annual sales volume until 2008. During 2007-2008 BPL's sales revenue was 3597 million Tk, and the employment size was 2384.

BPL is among the leaders in technology pioneering in the local industry. In 1996 it introduced SR (Sustained Released) dosage form in its capability line, while it gain added 'Suppository' form of dosage and 'Metered Dosage Inhaler (MDI)' and 'Metered Dosage Spray (MDS)' in its line. In 2001, BPL had introduced 'Small Volume Parenteral (SVP)' products and established an Analgesic-Anti-inflammatory bulk drug plant. In 2006, BPL commissioned its US 'Federal Drug Administration (FDA)' compliance Oral Solid Dosage (OSD) plant. These technology introductions and upgrading were facilitated through agreement and collaboration with different suppliers including Pamasol (Switzerland), Pharmaplan-Germany (a sister firms of Fresenius AG), and Pharma Italia Carlo Erba (Italy). In 2006, BPL has produced CFC free ozone benign HFA inhalers being the first Bangladeshi company. BPL has collaborative R&D agreement with Ciba Specialty Chemicals (Switzerland).

BPL produced both generic finished pharmaceutical products and 'Active Pharmaceutical Ingredients (API)'. In 1990, BPL got its own API unit for the first time. BPL is among the leaders in the market to introduce new and high-tech drugs in different therapeutic classes in the local market. In 2008, BPL's total offer in market was 240 (excluding dosage and delivery forms). BPL was the first Bangladeshi firm to introduce Anti-HIV drugs in 2003, which was recognized while Roche granted BPL license to produce its ant-retroviral drugs in 2007. BPL has diversified itself in producing anti-cancer therapeutic drugs in 2003. Among its recent introduction includes drugs relating to treatment of Parkinson's, Avian Influenza, Herpes and Psoriasis. BPL has several compliance certifications in its credit which reflect the quality assurance strength of the firm. In 2008, BPL has achieved 'Therapeutic Goods Administration (TGA) – Australia' approval being the first Bangladeshi firm. TGA is recognized by more than 20 developed countries including Canada, Germany, UK, France, Italy and etc.

Besides consolidating in local market, BPL has quite significant presence in international market. It exported API in 1992 as the first Bangladeshi firm, and exported finished formulation for the first time in 1993. BPL is the first local pharmaceutical firm to receive 'National Export Trophy (Gold)' for its export performance during 1994-1995. BPL was the first local firm to export intravenous fluids in 1995 to Russia and Vietnam. Today BPL is known as the most internationally committed pharmaceutical firm of the country. It exports its products to as many as 26 country markets. In 2007, BPL has earned 122.75 million Tk. from export. BPL has its management and associates in as many as 8 foreign countries.

BPL's internationalization took a distinguished turn, when it was registered in 'Alternative Investment Market (AMI)' of 'London Stock Exchange (LSE)' as the first Bangladeshi firm. BPL is engaged with major TNCs as contract manufacturer. In 2000, BPL executed inhaler manufacturing job for GlaxoSmithKline (GSK). In 2005, BPL has entered into 'toll manufacturing contract' for manufacturing the liquids, ointments, creams and suppository products for Novartis. BPL is the listed suppliers of UNICEF. BPL has been planning for more aggressive internationalization using its recent quality certifications and enhanced capabilities.

Eskayef Bangladesh Ltd. (SK+F)

SK+F is a second generation local firm that sprouted directly in the backdrop of streamlining the TNCs in the local market through enactment Drug Control Ordinance 1982. Beecham, a UK pharmaceutical firm, merged with 'SmithKline & French (SKF)' - USA in 1986, which was operating in Bangladesh. Bangladeshi conglomerate TRANSCOM acquired the assets, business and management of SKF's Bangladesh interests in 1990. This move turned the Bangladesh interests of world renowned SKF into a Bangladeshi private limited company, Eskayef (SK+F), under full Bangladeshi ownership and management.

SK+F inherited the technology and management through its lineage to 'SmithKline & French'. In 2004-2007 period, SK+F further expanded its production facilities and made technological upgrading in cooperation with Elomatic and Elomatic-Pharmalab, a Finish and Finish-Indian pharmaceutical engineering and consulting firm, in order to upgrade its facilities to the European standards. SK+F has built its own separated R&D and QC facilities in line with its commitment toward capability building.

SK+F locally manufactures and markets 157 products (excluding dosage forms) in 59 therapeutic classes. Besides finished products, SK+F is the only manufacturer and marketer of 'timed release blended pellets' in Bangladesh since 2001. SK+F has been constantly introducing new drugs in its manufacturing and business line. In 2006 it introduced 15 new products, 13 in 2007 and 12 in 2008. SK+F has introduced many new products in the local industry e.g. in 2004 reduced osmolarity ORS and anti avian flu drug in 2007 to mention a few. Beside its local production, SK+F is the importer and distributor of ophthalmological products of Allergan Inc – USA (among the world leaders in ophthalmological products). In 2008, SK+F has received the accreditation of MHRA-UK for its world class production, quality control and management.

SK+F rose to the position of the 5th largest pharmaceutical firm of Bangladesh in 2007 and maintained its position amid intense competition in the local market in 2008. In 2007, its annual sales was 2600 million Tk. with a percent growth in the previous year's sale. In 2007, SK+F's employment size was 1300.

Since 2005, SK+F has turned to international expansion as one of its growth paths. SK+F has been exporting both bulk pellets and finished generics to 16 country markets of Asia and Africa and Latin America. SK+F is systematically stepping up to enter into mainland European markets. In 2008, SK+F has set up its own office in UK and has started negotiating with number of European producers in order to buy their product and brand licenses. SK+F plans to produce those products in their own production facilities and export them in the European markets. It hopes that this will give it a fast track entry into European and other markets. SK+F plans to increase its export operation in non-regulated markets with more intensity. SK+F has already signed up a 'toll manufacturing' deal with a UK firm to

manufacture their cardiac, diabetic and hormone product and is negotiating the similar deal with a German and a Dutch firm. SK+F is an enlisted supplier of WHO and UNICEF.

Incepta Pharmaceutical Ltd. (Incepta)

Incepta, started only in 1999, is the most aggressive and dynamic pharmaceutical firm of Bangladesh, which represents the third generation of Bangladeshi pharmaceutical firms. Incepta was initiated by Mr. Abdul Muktadir, a former senior manager of BPL, and some of the dedicated and highly skilled professionals without any foreign collaboration or license. Incepta has risen to the position of the 2nd largest firm in terms of the sales volume in Bangladesh market in 2008, while its position was 31st in 2000. Incepta's sales figure stood at 3.07 billion Tk. in 2007-2008 with a 17 percent growth on previous years. It has a plan to make it 4.50 billion Tk. in 2009. Incepta had 1700 employees in 2007.

Incepta has been heavily relying on its capability to introduce new drugs in the market since its inception. Incepta has introduced on an average 12 new generics in the local industry in every year during the period of 2000 – 2008. In 2007, Incepta offered 450 products (280 generics) in the local market in 50 therapeutic classes. Incepta has been successfully producing high-tech therapeutic and biotech products. Incepta has its own state-of-the-art production facility. Incepta has received 'European GMP Compliance Certificate' in 2008 from the 'European Agency for the Evaluation of Medical Products (EAEM)' as the first Bangladeshi firm. Incepta has created its own R&D Department to explore and exploit opportunities for introducing more new generics and cutting-edge technologies in the firm and in the local industry. Its own API plant is underway and expected to commence in 2009.

Incepta has turned its eyes to international market in 2006. It started with exporting its finished formulations in different countries. In 2007, it exported its products to as many as 10 country markets. Incepta is in the process of registering its products and making arrangements for exports in 10 more country markets. Incepta is looking for aggressive expansion in international market in different forms. Incepta has already executed a contract with Austria-based Bano Pharmaceuticals, where Bano will outsource its production to the newly built production facilities of Incepta. Besides, Novartis is outsourcing some of its productions to Incepta. Incepta management has set up a more than 10 million Euro export targets for European market only. Incepta is confident that it can aggressively expand into European markets in the coming years, as they have European recognitions and have been already successful to manage European partners. Simultaneously it wants to expand in other export markets in other continents to turn the firm as a global player in the coming days. Incepta is an enlisted supplier of WHO and UNICEF.

Analysis and discussion

The four cases are the representative of different development phases of Bangladesh's pharmaceutical industry. All the four of the different generations have demonstrated a common growth path. The firms presented here have primarily concentrated toward consolidation in the local market maintaining the conformity with the arguments presented in the initial part of the paper. The firms have capitalized on local regulation i.e. enforcement of Drug Control Ordinance 1982. Though this ordinance came as a form of protection for the local entrepreneurs, it was unlike the common form of fiscal and entry deterrence protective measures. This regulation placed a different set of rule for the game correcting the TNCs and left the game open for both TNCs and local entrepreneurs. Local entrepreneurs put this new scenario in the business perspective not rent seeking perspective. Local entrepreneurs made investments out of their own pocket in sourcing technologies, sourcing right people and

developing operations through creating organizations. Entrepreneurs initially sourced the capabilities from available factor market. Though the TNCs backed off strategically, it didn't leave a vacuum in the industry. It just changed the composition of the competition, instead of the TNCs local firms started to compete each other for the lucrative domestic market. In this phase, the local firms were forced to build capabilities in-house as the general sourcing from the factor market doesn't ensure uniqueness of the resources of the organization. They had to rely on managerial mechanisms to generate the superiority and to protect own resources being imitated. As for example, Incepta has grown so rapidly as it has been successful to draw the talents raised by the other firms. The firm's they started to compete on the superiority of the resources to secure their place in the domestic market. All of them have lived in the common factor market (CSC), but their resources bundle didn't grow up in similar composition. For getting competitive advantage in domestic market, they utilized the CSC in their own ways. Differential ways of utilization of the country resources by the firms have resulted in development of asymmetric resources bundle in the firms, which has produced asymmetric competitive strengths of the firms.

All the four firms have been observed to evaluate the incentives of getting their operations extended to the international market. Only recently, both the four firms are unfolding for aggressive export venture or other form of international export. Since all the firms are GMP compliant by default for the local regulations, they had opportunities to export to the unregulated markets from the beginning. None of the firms didn't so, SPL waited 30 years, BPL 8, SK+F 13 and Incepta 7 years to start export for the first time. The managers revealed that they were aware of the opportunities and they had the capabilities well ahead for the export commencement, still they wanted to stay in home market as they found that growth trend in home market could entail the performance outcome which might not be sustainably higher in terms of investment for foreign operation. Recent change in the competitive dynamic in the home market, e.g. competition on cutting-edge manufacturing technology, newer products and more involved pattern of market servicing and relations are forcing the firms to make huge investments as well as international regulatory changes e.g. TRIPS have been the sources of alternative incentives for the local firm. The local firms are only deciding for international entry when these incentives are matched with their long-term planning and economically rewarding. The firms studies have mentioned that though their export earning is negligible in comparison to their earnings from domestic market, they are exporting and investing in facility upgrading as they see bigger opportunities in future both in international and home market. Cashing these opportunities will rest on efficiency in cutting-edge technology exploiting. This finding supports the argument that domestic competitiveness is a necessary precondition for international entry, but it doesn't guarantee the entry. Industry incentives moderate the decision of international entry by a competitive domestic firm.

The four firms studied have shown that they have expanded their international market in quite a short span of time since their entry into international market. They have developed suitable operational facilities. But once they did it, they relied on soft capabilities in greater extent. Interviews with managers of the firms have revealed that they want to make their presence in the global level and the investments they are doing in facility upgrading is just one of the components in their globalization. They have revealed that in generic drug production, they have the similar expertise compared to Indian firms even in lower costs. They cited the analogy that if the Indian firms can systematically step up to the global generic markets, they can do it for them too. For doing this they have to make their presence felt in as many as country markets. Such mental frame has been argued as the 'organizational cultural milieu' in the theoretical discussion of higher order capability.

Another interesting point raised to the managers was about how they bundle of diverse foreign markets in respect of marketing. The four firms on an average operate in more than 15 countries spanning in Asia, Africa, South America and Europe. The individual markets are different in regulatory requirements and business and national cultures. In such situation the firms have developed their marketing strategy focusing on the nature of their products. Since their product is similar for each market, they deliberately try to draw a common set marketing program. The firms have developed a general package of marketing program involving pricing, promotion, and distribution and market relations for all the markets which mostly fit with the configuration of their offer. They only make necessary adjustments to such package with demand of the market and regulatory requirement of the market. Designing such a plastic marketing program signifies the firm's distinct capability, which is quite a higher-order capability than designing a regular marketing program in the domestic market.

Learning from one market and applying the knowledge in another market have been observed to be a proactive practice by the firms. The firms have reported that they choose the markets deliberately which is representative of a group of other markets. They learn from that reference market and apply this knowledge in other markets. As per example, BPL has committed substantial resources to get into Chilean market and has been successful in this regard. BPL describes this as a strategic move in terms of learning, as Chilean market is regarded as the most sophisticated market in Latin America. BPL hopes that its Chilean market knowledge would facilitate them to expand in other South American markets. Incepta has made the same reports about Austrian market as well as SPL and SK+F have made the similar assessment about their UK activities. Each of firms has mentioned their similar learning strategy about other markets in Asia and Africa. This type of experiential knowledge has been mentioned as market-based learning in the theoretical discussion. Such learning orientation and execution is definitely a higher order capability of the firms.

Conclusion

The case studies show that the firms have gone through different transformational phases in response to the developments related to the particular industry. In different phases of transformation, different set of capabilities emerged as the most featured capabilities. In the initial phase, the Bangladeshi firms fundamentally relied on operational capabilities including technology, human resources sourcing and positioning in the local market as a means of survival and growth. Once the firms succeed to develop and exploit the fundamental operational capabilities, they looked for further expansion and thought about internationalization as an option in this regard. Each of the firm included in this study has revealed that they entered into their initial engagements in international market without any predefined sustained motive of being an international firm. They merely tried to explore the international market. After a period of engagement in international market, the firms adopted internationalization as a systematic growth option. They started systematic efforts on learning about different markets, looking for strategies for entering and serving international market and incorporating in mental frame of managers that the firm places value on international expansion along with domestic growth. A sustained practicing of these functions turned them into the capabilities of the firms. These capabilities energized the firms to expand in the international market.

The cases have initially laid support to the proposed evolutionary capability-based model. Though the case studies were quite extensive in nature, the sustainability of the merit of the

model will depend on further empirical researches on this model in different industry aspects. Both qualitative researches and quantitative research outputs are required for the further validation and improvement of the model. This research has so far been successful to lay down a general theoretical framework for explaining internationalization process, which is could be helpful to research on internationalization of both old and new firm from both developed and developing nations.

References

Alchian, A. (1950), 'Uncertainty, Evolution and Economic Theory', *Journal of Political Economy*, 58, 211–221.

Andersen, O. (1997), 'Internationalization and market entry mode: a review of theories and conceptual frameworks', *Management International Review*, 37(2), pp. 27-42.

Athreye, S., D. Kale, and S.V. Ramani (2008), 'Experimentation with strategy and the evolution of dynamic capability in the Indian Pharmaceutical Sector', *MERIT Working Paper Series No. 2008-041*, Maastricht Economic and Social Research and training centre on Innovation and Technology (MERIT), United Nations University.

Axinn, N. C., and P. Matthyssens (2002), 'Limits of Internationalization Theories in an Unlimited World', *International Marketing Review*, 19(5), pp. 436 – 449.

Barney, J.B. (1986), 'Organizational Culture: Can It Be a Source of Sustained Competitive Advantage?', *The Academy of Management Review*, 11(3), 656-665.

Barney, J. B. (1986), Strategic factor markets: Expectations, luck and business strategy, *Management Science*, 32 (October), pp. 1231-1241.

Bell, J., R. McNaughton, S. Young (2001), 'Born-again global firms – An extension to the 'born global' phenomenon', *Journal of International Management*, 7, 173-189.

Bürgel, O., A. Fier, G. Licht, and G. C. Murray (2004), 'The Internationalisation of Young High-Tech Firms', *ZEW Economic Studies*, 22, Heidelberg, New York.

Calof, J. and Beamish, P. (1995), Adapting to foreign markets: explaining internationalization, *International business Review*, 4(2), 115-31.

Cattani, G., and A.E. Tschoegl (2002), 'The Internationalization Process: Chase Manhattan Bank, 1917 to 1996'. *FIC Working Paper No. WP02-37*, The Wharton Financial Institution Center.

Cavusgil, S. T. (1994), 'A quiet revolution in Australian exporters', *Marketing News*, 28, (11), 18-21.

Chowdhury, F. (2006), 'A Strategy for Establishing the API Park', *Consultant Report for the Ministry of Industry*, Government of the Peoples Republic of Bangladesh.

Coad, A. (2007), 'Firm growth: A survey, Papers on Economics and Evolution 2007-03', *Evolutionary Economics Group Working Paper*, Max Planck Institute of Economics.

- Coviello, N., and H. Munro (1997), 'Network relationships and the internationalization process of small software firms', *International Business Review*, 6(4), 361-386.
- Cullin, J.B. (1999), *Multinational Management- A Strategic Approach*, Pre-Press Company, Inc.
- Day, G. S. (1994), 'The Capabilities of Market-Driven Organizations', *Journal of Marketing*, 58(4), 37-52.
- Denison, R. D. (1996), 'What is the difference between Organizational Culture and Organizational Climate? A Native's Point of View on a Decade of Paradigm War', *Academy of Management Review*, 21(3), 619-654.
- Elango, B. (1988), 'Influence of Industry and Firm Drivers on the Rate of Internationalization of U.S. Firms', *Journal of International Management*, 1(4), 201-221
- Faroque, A.B.M. (2006), 'Pharmacy Graduates Association, Bangladesh: An Introduction', *The Phrama World*, 1(1), 27-28.
- Foster, J. (1997), The analytical foundations of evolutionary economics: from biological analogy to economic self-organisation, *Structural Change and Economic Dynamics*, 8, 427-451
- Ghertman, M., and A.L. Hadia (2006), 'Institutional Assets and Competitive Advantages of French over U.S. Cinema, 1895-1914', *International Studies of Management and Organization*, 35(3), 50-81.
- Grant, R. M., A. P. Jammine and H. Thomas, (1988), 'Diversity, diversification, and profitability among British manufacturing companies, 1972-84', *Academy of Management Journal*, 31, 771-801
- Grant, R.M. (1991), 'The resource-based theory of competitive advantage', *California Management Review*, 33, 114-135.
- Hamilton, D. (1999), *Evolutionary economics - A study in economic thought*, New Brunswick: Transaction Publishers (1999 edition with a new introduction by the author, the original was 1970).
- Hannes, K., and Ø. Fjedstad (2000), 'Linking Intangible Resources and Competition', *European Management Journal*, 18 (1), 52-62.
- Hashai, N., and T. Almor (2004), 'Gradually internationalizing 'born global' firms: an oxymoron?', *International Business Review*, 13, pp. 465-483.
- Hodgson, G. M (2002), 'Darwinism in economics: from analogy to ontology', *Journal of Evolutionary Economics*, 12, 259-281
- Hodgson, G. M., and T. Knudsen (2006), 'Why We Need a Generalized Darwinism: and Why a Generalized Darwinism is Not Enough', *Journal of Economic Behavior and Organization*, 61 (1), 1-19.

Hooley, G., H. Fahy, T. Cox, J. Beracs, K. Fonfara, and B. Snoj (1999), 'Marketing Capabilities and Firm Performance: A Hierarchical Model', *Journal of Market Focused Management*, 4, 259-278.

Jain, S.C. (1989), 'Standardization of International Strategy; Some Research Hypotheses', *Journal of Marketing*, 53(1), 70-79.

Jansson, H. (2005), 'Internationalization processes in the new EU: Market growth, Relocation, and outsourcing', *paper presented at the 7th annual conference on European integration, Mölle, May 24-27, 2005 organized by the Swedish network for European Studies in Economics and Business (SNEE)*.

Jansson, H. (2007), *International Business Marketing in Emerging Country Markets: The Institutional Network Approach*, Cheltenham: Edward Elgar.

Jansson, H, and S. Sandberg (2008), 'Internationalization of small and medium enterprises in the Baltic sea region', *Journal of International Management*, 14, 65-77.

Johanson, J., and J.E. Vahlne (1977), 'The internationalisation process of the firm', *Journal of International Business Studies*, 8 (Spring/Summer), 23-32.

Johanson, J., and J.E. Vahlne (1990), 'The mechanism of internationalization', *International Marketing Review*, 7(4), 11-24.

Knudsen, T., T.K. Madsen (2002), 'Export strategy: a dynamic capabilities perspective', *Scandinavian Journal of Management*, 18(4), 475-503.

Katsikeas, S. C., and C. L. Leonidou (1996), 'Export Market Expansion Strategy: Differences between Market Concentration and Market Spreading', *Journal of Marketing Management*, 12, 113-134.

Lincoln, Z., and H. Bhattacharjee (2007), 'Pharmaceutical Industry in Bangladesh: structure, Performance and Future Strategies', *The Business and Economic Review*, 1(1), pp. 2-13.

Li, T., and T.S. Cavusgil (1995), 'A Classification and Assessment of Research Streams in International Marketing', *International Business Review*, 4(3), 251-278.

Luo, Y. (2000), 'Dynamic Capabilities in International Expansion', *Journal of World Business*, 35 (4), 355-378.

Madsen, K.T., and P. Servais (1997), 'The Internationalization of Born Globals: an Evolutionary Process?', *International Business Review*, 6(6), 561-583.

Mathews, J. A. (2006), 'Dragon Multinationals: New players in 21st century globalization', *Asia Pacific Journal of Management*, 23 (1), pp. 5-27.

Meisenbock, K. (1988), 'Small Business and Internationalization: a Literature Review', *International Small Business Journal*, 6 (January-March), 442-461.

- Meyer, K., and A. Skak (2002), 'Networks, serendipity and SME entry into eastern Europe', *European Management Journal*, 20 (2), 179-188.
- Moran, E. T. and J.F. Volkwein (1992), 'The cultural approach to the formation of organizational climate', *Human Relations*, 45(1), 19-47.
- Morgan, R., and C. Katsikeas (1997), 'Theories of international trade, foreign direct investment and firm internationalization: a critique', *Management Decision*, 35 (1), 68-78.
- Morgan, R.E. (2004), 'Market-Based Organisational Learning - Theoretical Reflections and Conceptual Insights', *Journal of Marketing Management*, 20 (1-2), 67-103.
- Nelson, R., and S. Winter (1982), *An Evolutionary Theory of Economic Change*, Harvard University Press, Cambridge, MA.
- Oviatt, B. M., and P.P. McDougall (1994), 'Toward a Theory of International New Ventures', *Journal of International Business Studies*, 25 (1), 45-64.
- Penrose, E. T. (1959), *The Growth of the Firm*, Wiley: New York.
- Pettigrew, A. M. (1990), 'Is corporate culture manageable?', in Wilson, D. and Rosenfeld, R. (eds.), *Managing Organisations*, 267-72.
- Porter, M. E. (1990), *The Competitive Advantage of Nations*, New York: Free Press.
- Ramamurti, R. and J.V Singh (2009), 'Indian internationals: generic internationalization strategies,' in R. Ramamurti and J.V Singh (eds), *Emerging Multinationals in Emerging Markets*, Cambridge University Press: Cambridge.
- Rennie, Michael W. (1993), 'Global competitiveness: Born global', *McKinsey Quarterly*, (4), 45-52.
- Ridley, M. (1996), *Evolution*, 2nd edition, Oxford: Blackwell.
- Rugman, A. M. (1981), *Inside the Multinationals: the Economics of Internal Markets*, New York: Columbia University Press.
- Rugman, A. M., and A. Verbeke (2003), 'Extending the theory of the multinational enterprise: Internalization and strategic management perspectives', *Journal of International Business Studies*, 34(2), 125-137.
- Sarker, M.M.M. (2006), 'Pharmaceutical Sector of Bangladesh – Opportunities and Obstacles', *The Phrama World*, 1(1), 19-22.
- Schuerer, T.W. (2005), 'A Model for Strategy and Tactical Steps that Create Enterprise Capability – Capability-Strategy: The Six Factor Model', *Carlson School of Management*, University of Minnesota.

Srivastava, R. K., L. Fahey and K. Christensen (2001), 'The resource-based view and marketing: The role of market-based assets in gaining competitive advantage', *Journal of Management*, 6, 777–802.

Taher, M. (2006), 'Pharmaceutical Biotechnology in Bangladesh: A Background Review for a 'System of Innovation' Review', *UNU-MERIT*, The United Nations University: Maastricht – The Netherlands.

Teece, D.J., G. Pisano and A. Shuen (1997), 'Dynamic capabilities and strategic management', *Strategic Management Journal*, 18(7), 509-533.

Varadarajan, Rajan. P., and T. Clerk (1994), 'Delineating the scope of Corporate, Business and Marketing Strategy', *Journal of Business Research*, 31, 93-105.

Veblen, T. B. (1994), 'Why is economics not an evolutionary science', In T. Veblen (Ed.), *The place of science in modern civilisation and other essays* (pp. 56–81). London: Routledge / Thoemmes Press (First printed in *The Quarterly Journal of Economics*, Vol. XII, July, 1898).

Wan, W. P. and R. E. Hoskisson (2003), 'Home country environments, corporation diversification strategies, and firm performance', *Academy of Management Journal*, 46, 27–45.

Wan, P. W. (2005), 'Country Resource Environments, Firm Capabilities, and Corporate Diversification Strategies', *Journal of Management Studies*, 42(1), 161-182.

Webster, F. E. (1992), 'The Changing Role of Marketing in the Corporation', *Journal of Marketing*, 56, October, 1–17

Witt, U. (1997), 'Self-organisation and economics – what is new?', *Structural Change and Economic Dynamics*, 8, 489–507.

Witt, U. (1999), 'Bioeconomics as economics from a Darwinian perspective', *Journal of Bioeconomics*, 1(1), 19–34

Yip, G.S. (1989), 'Global strategy . . . In a world of nations?', *Sloan Management Review*, 33 (1), 29–41.

Internationalization Processes and Patterns of Korean Technology-Based Start-Ups

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This study investigates the internationalization processes of Korean high-tech venture firms based on the case studies of 10 highly internationalized IT ventures. The research model is developed on the relationship between internal/external characteristics of ventures and their internationalization process, in terms of goal, timing, mode, strategy approach, degree and performance of internationalization. The results find several types of evolutionary processes of internationalization. In particular, *born global* ventures' characteristics (such as entrepreneur, organization, market, and motivation) and internationalization strategies and processes (such as entry mode, the degree and path of internationalization, strategy, and performance) are analyzed at the individual and firm levels. In addition, benchmarking models and guidelines of internationalization, and managerial implications for the venture firms which are preparing to go abroad are presented. Furthermore, policy implications are derived for venture-promoting organizations such as government authorities, local autonomous entities, and overseas business incubators.

Track: 7. International Entrepreneurship

A Study on the Market Orientation and Communication Method of International Strategic Alliance: Comparison of Small and Medium-sized Firms in U.S. and Korea

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Abstract

Improving international alliance performance is critical issues, especially for small and medium sized firms(SMFs), because there may be a serious dissatisfaction with their marketing performance. It indicates that they perceive the need for international strategic alliance but they find them difficult to manage. This article discussed the factors affecting international marketing communication for international joint ventures. It empirically compared market orientation and method of communication with strategically allied SMFs in both U.S. and Korea. The result shows that U.S. joint ventures tend to be more intelligence generation than korean's and korean joint ventures are apt to be more intelligence dissemination and intelligence responsiveness than U.S.'s. korean joint ventures often have an official communication, but U.S. joint ventures frequently communicate with their partners informally. The finding also compared with the number of partners they have and the period of strategic alliance on market orientation and method of communication. This allows reader to see the distinct differences between U.S. and korean SMFs operating joint ventures.

Introduction

International strategic alliance formations have increased dramatically over the past decade and, in many US and korean industries, alliances are now a central strategic component and a core offensive and/or defensive competitive weapon. Consistent with this trend, the number of international strategic alliance in US and Korea gradually have been increased. However, despite the growing numbers and increasing significance of international strategic alliances, especially for small and medium sized firms(SMFs), many fail, while an even greater proportion perform poorly. Although such failures may be for many interrelated reasons and may be defined in various ways, the most common causes are poor alliance management. Thus, there may be serious dissatisfaction with their marketing performance. It indicates that they perceive the need for international strategic alliance but they find that difficult to manage.

Recent research has shown that the majority of internationalizing SMFs consider alliances essential to the success of the company(Johan and shepherd, 2009) but it has limited 'why' questions which focus on understanding some reasons of firms enter alliances and their structures in certain ways and the performance benefits sought from them. However, this paper poses the 'how' questions for alliance, it highlights an important set of conditions deriving from international

communication which firms come to be placed that influences their performance related to alliance and tries to give specific answers to build international marketing strategy by compares two different countries.

To test significant differences between strategic alliance by market condition, the market orientation and communication method, data were collected from SMFs in Korea and US. SMFs were used because they tend to prefer alliances when expanding internationally; alliances provide market access and local knowledge; resources not usually available to a foreign SMF (Brouthers and Nakos, 2004).

Therefore, the objective of this paper is to verify communication orientation will be different by cultural differences between Korea and US and this may derive distinctive communication methods. It also tests there may have significant differences of market orientation and communication method by number of partner and period of international strategic alliance. This article allows reader to see the distinct differences between U.S. and Korean SMFs operating international strategic alliance.

Literature Review

International strategic alliance

With the integration of global markets and rapid shift in technologies, the formation of cross border interfirm cooperation has become a favored strategy of international expansion (Lu and Beamish, 2001). Alliances with foreign partners are an important strategy move that could provide access to outside sources of competitive advantage of global network (Lummer and McConnell, 1990). International strategic alliance form links with partnering firms or disband quickly in response to changing market demand. This flexible structure facilitates experimentation with combination of participants in the develop of new product, technologies or markets. Therefore nonentity international strategic alliances are particularly valuable to those firms that compete in environments characterized by rapid rates of change in product design and process technologies, with significant risk of failure at the development age, and rapid obsolescence of products once they enter production (Graebner, 2004).

International strategic alliance may have problems with integration which can be attributed to corporate cultural differences and national differences. As a result of cultural "distance", international strategic alliance is required to understand and overcome differences in value systems and cultural norms which allows for grater speed and certainty in selecting right firm to acquire and facilitate more rapid development of mutual understanding and trust. For international strategic alliances to effectively fuction, decision must often be reached by consensus between parties (Smith, 2001). If consensus is not achieved, there are likely to be substantial costs associated with coordination, monitoring, avoid opportunistic behavior, and resolving conflict (Brush, 2000). Efficient control of international strategic alliance involves the construction of contract to achieve the desired partner behavior, to be able to monitor the partner's action, and penalize partner behavior that does not conform to the contractual expectation of the alliance. But international strategic alliance also depend on mutual understanding and trust (Arino et al., 2005).

The uncertainty surrounding international strategic alliance is high due to the limited information availability characterizing international business and overseas markets. However, as the firm becomes more involved in globalization and accumulates more foreign market-related knowledge, the degree of uncertainty gradually diminishes, encouraging expansion of its business (Brouthers and Nakos, 2004). As opposed to neophyte market entry which have a strong need for experiential information and information pertaining to general aspects of entering international market,

more advanced market entry tend to seek more objective information of a specific nature (e.g., characteristics of a certain overseas market) (Kotabe and Czinkota, 1992) so that international strategic alliance is strongly required information availability.

Market Orientation

Market orientation is the organization-wide generation of market intelligence, the dissemination of that intelligence across organizational units, and the organization-wide responsiveness to it (Jaworski and Kohli, 1993). Intelligence is the starting point of a market orientation. It is a broader concept than partner's verbalized needs and preferences in that it includes an analysis of exogenous actors that influence those needs and preferences. Intelligence dissemination is the process and extent of market information exchange within a given firm (Kohli, Jaworski and Kumar, 1993). Responsiveness is the action taken in response to intelligence that is generated and disseminated (Akyol and Akehurst, 2003).

On the other hand, market orientation can be conceptualized as a characteristic of organizational culture and emphasized its role in directing the attention and behavior of management (Deshpande et al., 1993). Market orientation as a culture is manifested in the fundamental assumptions, strategic orientations, or business logic embraced by the members of an organization (Locander, et al, 2000). A market-oriented organizational culture, as opposed to an internally predisposed-technology-oriented culture, places high priority on firm-wide behaviors geared toward understanding partner needs, achieving sustainable strategic competitive postures, and enhancing superior partner value (Pelham, 1999).

Communication method

International marketing communications is similar to that in domestic operations; that is, to communicate to customers the information that they need to make buying decisions. Specially, its main purpose is to communicate with the target customers and position the brand within international markets. The international marketing communications is classified by Anderson and Narus (1990). Communication which can be defined broadly as the formal as well as informal sharing of meaningful and timely information between firms (Anderson and Narus 1984). Every organization has a formal communication system. This formal system provides information regarding the organization to their customers through different media. The formal network, reports, formal-meetings, conferences, official letters or notices, is highly documented and as such has very little chance for change. However, nearly all of the information within the informal communication is undocumented and is thereby open to change and interpretation as it moves through the network. However, nearly all of the information within the informal communication is undocumented and is thereby open to change and interpretation as it moves through the communication network. It often travels faster than formal channels and provides differentiated information. The informal communication is very useful in supplementing formal channels. It also helps satisfy a natural desire to easily know what is really going on.

Hypotheses

The first determinant, from the market orientation and communication method aspects, is distinct differences between alliance partners, which refers to the cultural incompatibility between alliance partners (Meschi and Roger, 1994). Global strategic alliance requires cooperation between partners from different countries and the need for cooperation raises the issue of how partners with different national cultural values interact with each other (Steensma et al., 2000).

Market orientation and Communication method will be different along culturally embedded managerial practices. SMFs in US tend to play a leading role for exchange market information with their partner. They take care of collecting intelligences as much as possible to actively manage partner's market information and make the best use of it. On the other side, SMFs in Korea is more likely to share market information with their alliance partner and response what their partner's opinion of each market because they tend to maintain their relations in the long run. In case of communication method, SMFs in Korea have more considered formal and formalized communication than informal communication because it's had bureaucratism. However, SMFs in US less consider formal communication than Korea. Thus, the market orientation and communication method between global strategic alliance partners may have significant differences by culture and national disposition. Thus, the following hypothesis is proposed:

H1. Market orientation(intelligence generation/intelligence dissemination/intelligence responsiveness) in international strategic alliance may have distinct differences between U.S. and Korean SMFs.

H2. Communication method(formal/informal communication) in international strategic alliance can be different between U.S. and Korean SMFs.

Based on primary research, the number of partners has the relationship with increasing strategic alliance performance from the viewpoint of creating value and cost. Strategic alliance is a prominent way to secure complementary resources which partners are mutually needed. It means that international strategic alliance is a combination of mutually complementary resources such as a market orientation. Thus, creating value of synergy is essential issues in international strategic alliances and it crucially influence to joint venture's existence and business performance(Madhok, 1995; Beamish and Banks, 1987). For instance, a firm trying to enter international strategic alliance struggles to create synergy value by combine their own sources with mutually complementary ones of alliance partner(Beamish and Banks, 1987). At this point, rising number of partner means expansion of combining complementary resource grows. It enables to be understood increasing potential synergy and to make market orientation easy. Furthermore, rising number of partner also allows managing communication systematically. In this case, communication method should be more formal and formalized. Thus, the following hypothesis is proposed:

H3. Market orientation(intelligence generation/intelligence dissemination/intelligence responsiveness) in international strategic alliance of SMFs may have differences by number of foreign partners.

H4. Communication method(formal/informal communication) in international strategic alliance of SMFs could be different by number of foreign partners.

Dussauge and Garrette(1995) argued that alliances are strategic activities by more than two firms based on objectives of mutual exchanges. They verified alliance performances by existing and maintaining alliance terms of each partner and showed that as existing and maintaining alliance terms become longer, trust and commitment increase. When a firm has long-term relationship with their alliance partner, it occurs transaction specific assets which can not be easily switched to another partner because it adjusts its management to partner's condition(Brouthers and Nakos, 2004). As increasing trust and commitment by long-term relationship, exchanging information with their partners which is called market orientation are getting revitalized. In long-

term relationship, its informal communication occurs more frequently than formal communication because it becomes to simplify communication procedure due to the high trust and commitment. Thus, we suggest following hypothesis:

H5. Market orientation (intelligence generation/intelligence dissemination/intelligence responsiveness) in international strategic alliance of SMFs may be differences by the period of alliance.

H6. Communication method(formal/informal communication) in international strategic alliance of SMFs could have differences by period of alliance.

Methodology

Data collection

We collected data from SMFs in Korea and US. We decided to use samples of SMEs from two very different regions of the world in order to increase the generalizability of our findings. Because there were no available lists of SMFs involved in international alliances, we decided to use lists of exporting firms. These lists would provide us with firms that (1) had international experience and (2) had as a minimum developed non-equity based alliances (but may also have other forms of alliances) through which they sold their products/services in foreign markets. Our sample of Korean firms came from a list of exporting firms provided by Korean chambers of commerce. From these 2500 companies, 1500 firms were selected randomly to receive our questionnaire. The questionnaire was translated from English to Korean, the language of the managing directors of the SMFs. Then it was back-translated into English by an independent translator to ensure its validity. The study adopted a mail survey approach using a business directory covering firms in Korea and U.S. Questionnaires were sent to senior executives such as CEOs, marketing managers, general managers, and managing directors who are knowledgeable about their firms' international marketing activities. Most of the samples were operating in traditional manufacturing industries like textile, chemical, food processing, and manufacturing of building materials. Two hundred thirty five usable surveys were received from a mail out to Korean and U.S. firms, making the response rate 20%. This response rate is comparable to many industrial surveys, as suggested by Hart (1987). The collected data were input in the Statistical Package for the Social Sciences (SPSS) program for reliability analysis and T-test. At the beginning of the questionnaire, the respondents chose whether a firm takes equity or non-equity based alliance on which the answers to the questions were based. The advantage of this approach is that the information given is more focused and pure (Wong and Merrilees, 2007).

Analysis and Results

Either interval or ratio scales was used for the variables in this study, the endpoints from 1, 'strongly disagree', to 7, 'strongly agree', as recommended by Schumacker and Lomax (1996). To examine the reliability of the variables, Cronbach's alpha tests were performed to assess the degree of consistency between multiple measurements of a construct (George et al., 2005). The coefficient cutoff of the Cronbach's alpha tests is 0.6, as suggested by Robinson,

Shaver, and Wrightsman (1991). Items below this cutoff were taken out from further analysis to ensure reliability of the constructs. Details of the reliability tests are shown in Table 1.

<Table 1> Reliability and validity

Construct (Cronbach's α)	Item	Factor				
		1	2	3	4	5
intelligence generation (.864)	delivering necessary information to each other	0.161	0.294	0.802	0.178	0.145
	having a give and take relationship	0.258	0.258	0.792	0.072	0.156
	fairly exchanging resources	0.291	0.265	0.721	0.163	0.282
intelligence dissemination (.909)	sharing a lot of market information	0.362	0.129	0.165	0.880	0.129
	exchanging a great deal of market orientation	0.446	0.148	0.170	0.835	0.114
intelligence responsiveness (.938)	efficiently allocating alliance resources	0.840	0.065	0.210	0.297	0.167
	implementing strategies with partner	0.835	0.122	0.219	0.267	0.165
	well coordinated of effectively using alliance resources	0.845	0.133	0.225	0.242	0.153
formal communication (.742)	exchange of information frequently in formal meetings	0.149	0.181	0.203	0.169	0.828
	having a formal meeting with the partner firm	0.214	0.255	0.192	0.039	0.808
	frequently occurring extensive formal communications	0.162	0.786	0.193	0.109	0.249
informal communication (.756)	having an informal meeting with the partner firm	0.011	0.804	0.288	0.142	0.152
	frequently occurring extensive informal communications	0.117	0.834	0.203	0.040	0.113
Eigen values		2.733	2.355	2.229	1.817	1.669
% of variance		21.023	18.115	17.146	13.978	12.835

Hypothesis 1 investigates that market orientation(intelligence generation/intelligence dissemination/intelligence responsiveness) in international strategic alliance may have distinct differences between U.S. and korean SMFs. First,

X²-test was used to investigate intelligence generation, and Table 2 shows significant differences between US and Korea in market orientation and the results that SMFs in US generate more intelligences than SMFs in Korea. However, as a result of analyzing intelligence generation and intelligence responsiveness, SMFs in Korea disseminate and response more intelligence than US. It is said that US firms focus on collecting market information from their partners but Korean firms tend to fairly exchange information and response partner's need and wants.

<Table 2> T-test results for verifying hypothesis 1

Hypothesis	Dependent Variables	country	Sample Size	Average	Standard Deviation	T-value	F-value	P-value
H1	intelligence generation	US	124	5.05	1.204	5.559	6.628	0.000
		Korea	107	4.23	1.005			
	intelligence dissemination	US	124	3.89	1.478	-3.381	11.795	0.001
		Korea	107	4.47	1.061			
	intelligence responsiveness	US	124	4.35	1.264	-2.022	1.828	0.044
		Korea	107	4.66	1.069			

Next, T-test was used as shown in Table 3 to compare communication method between SMFs in Korea and US. First, the result indicates some differences between two countries in the way they communicate with their partner. Both formal and informal communication occurs more frequently in US than Korea. Second, it also shows US firms more informally communicate with their partners but Korean firms more often tend to have formal communication than informal ones. Accordingly, communication method in international strategic alliance can be different between U.S. and Korean SMFs.

<Table 3> T-test results for verifying hypothesis 2

Hypothesis	Dependent Variables	country	Sample Size	Average	Standard Deviation	T-value	F-value	P-value
H2	formal communication	US	124	4.75	1.195	3.490	1.403	0.001
		Korea	107	4.24	0.998			
	informal communication	US	124	4.95	1.298	5.411	7.288	0.000
		Korea	107	4.11	1.033			

Hypothesis 3 compares market orientation by number of international alliance partners. Table 4 shows there are no differences between the two groups(number of partner is one and more than 2). The result shows that rising number of partners doesn't affect to exchange their market information for alliance partners.

<Table 4> T-test results for verifying hypothesis 3

Hypotheses	Dependent Variables	no. of partner	Sample Size	Average	Standard Deviation	T-value	F-value	P-value
H3-1	intelligence generation	1	115	4.75	1.249	1.055	0.257	0.293
		more than 2	101	4.57	1.163			
H3-2	intelligence dissemination	1	115	4.02	1.440	-1.676	2.953	0.005
		more than 2	101	4.32	1.194			
H3-3	intelligence responsiveness	1	115	4.42	1.243	-1.068	0.754	0.287
		more than 2	101	4.60	1.151			

Hypothesis 4 examined whether communication method in international strategic alliance of SMFs has distinct differences by number of partners or not. As shown in Table 5, there's no difference in communication method by number of partners.

<Table 5> T-test results for verifying hypothesis 4

Hypotheses	Dependent Variables	no. of partner	Sample Size	Average	Standard Deviation	T-value	F-value	P-Value
H4-1	formal communication	1	115	4.62	1.226	1.305	0.789	0.193
		more than 2	101	4.42	1.067			
H4-2	informal communication	1	115	4.67	1.328	1.338	2.450	0.182
		more than 2	101	4.44	1.191			

Table 6 is shown that the result of Hypothesis 5 investigates which market orientation in international alliance of SMFs has differences by the period of alliance. It indicates there are no differences in intelligence generation but intelligence dissemination and intelligence responsiveness are more often occurred in alliance partners which has over 5 years relationship. As a result of this, actively sharing and responding market information is needed to maintain long-term relationship with alliance partners

<Table 6> T-test results for verifying hypothesis 5

Hypotheses	Dependent Variables	Type	Sample Size	Average	Standard Deviation	T-value	F-value	P-Value
H5-1	intelligence generation	less than 5 yrs.	124	4.62	1.120	-0.569	5.193	0.570
		over	91	4.71	1.314			

		5 yrs.						
H5-2	intelligence dissemination	less than 5 yrs.	124	3.86	1.328	-3.438	0.041	0.001
		over 5 yrs.	91	4.48	1.291			
H5-3	intelligence responsiveness	less than 5 yrs.	124	4.23	1.197	-3.404	0.003	0.001
		over 5 yrs.	91	4.78	1.149			

Final table is for verifying Hypothesis 6. It analyzes whether communication method could have differences by period of alliance or not. As shown the result, there are no differences between two communication method due to the alliance terms of partner.

<Table 7> T-test results for verifying hypothesis 6

Hypotheses	Dependent Variables	Type	Sample Size	Average	Standard Deviation	T-value	F-value	P-Value
H6-1	formal communication	less than 5 yrs.	124	4.40	1.113	-1.488	0.892	0.139
		over 5 yrs.	91	4.63	1.181			
H6-2	informal communication	less than 5 yrs.	124	4.48	1.219	-0.744	1.344	0.458
		over 5 yrs.	91	4.61	1.323			

Discussion and implication

The primary focus of research on alliances has been to ask the ‘why’ question, which focuses on understanding some of the reasons firms enter alliances, structure them in certain ways, manage and change them, and the performance benefits sought from them. One of the problems with an orientation toward ‘why’ questions is that they are syntactically inclined to teleological or functional answers(Granovetter, 2004). More important, this leads to an avoidance of the ‘how’ question, which focuses on some of the conditions for international alliance under which certain factors outcomes are differently. This paper poses the ‘how’ question for alliances and highlights an important set of conditions deriving from the market orientation and communication method in which firms come to be placed that influences their behavior and performance related to alliances. It demonstrates how different factors of ,market orientation and communication can be influential in the creation and success of alliances and shows how a perspective informed by different conditions of alliance partners can provide important new insights into some of the key current issues on strategic alliances.

This paper compares different conditions of international alliance between SMFs in Korea and US. It suggests that knowing different conditions for international alliance such as market orientation and communication method is valuable information that provides both opportunities and constraints for firms and

have important behavioral and performance implications for their alliances. By understanding this information, market orientation and communication method enable firms to improve relationship of alliance partners and can thus influence how often and with whom those firms enter into alliances. As a result of analysis, SMFs in US focuses more collecting market information from their alliance partner. They tend to lead a relationship with their partners by generating that information but do not consider for maintaining the relationship in the long-run through sharing and responding partner's needs and wants. On the other hand, SMFs in Korea are likely to consider the relationship with their partners due to keep an ear to their alliance partners. They seem to be more concern about what the partner want and need. Through this, they desire to have long-term relationship in international strategic alliance. Communication method is different between SMFs in Korea and US. Firms in US more frequently communicate with their partners than Korea. However, the result indicated that there are significant differences in methods of communication between both countries. In case of Korea, formal and formalized communication is preferred because it might be different national culture that Korean still has bureaucratism and consider courtesy process in business circumstance. The result of this study also shows that communication orientation has differences by period of alliance. It says that firms can have long-term relationship with their alliance partner based on high trust and commitment through tailing to their partners by exchanging information.

Incorporating several factors into our account of the alliance of SMF's firms not only provides us with a more accurate representation of the key influences on the strategic actions of firms(Voss et al., 2006), but has important implications for managerial practice as well, many of which have yet to be explored. For instance, an understanding of the dynamics of market orientation and communication method that influence the formation of new alliances can provide insights for managers on the communication process that may lock them into certain courses of action as a result of constraints from their current ties. They may choose to anticipate such concerns and proactively initiate selective communication method that enhance their informational capabilities. Thus, by examining the specific way in which communication method may constrain firms' future actions and channel opportunities, firms themselves can begin to take a more forward-looking stance in the new ties they enter. They can be proactive in designing their marketing strategies and considering the ramifications on their future choices of each new tie they form. They may also selectively position themselves in international strategic alliance to derive possible control benefits as well. Similarly, there are numerous insights that result from understanding the complexities associated with managing a portfolio of alliances and the relational capabilities required to do so successfully. Ultimately, managers want to know how to manage individual alliances, and recognition of some of the factors such as market orientation and communication method influence the evolution and eventual performance of alliances can be extremely beneficial. The challenge for scholars studying market orientation and communication method in international strategic alliance is to bridge the chasm between theory and practice and translate some of their important insights for managers of the alliances we study.

References

Ajay k. kohli and J. Jaworski, Bernard (1990). "Market orientation: The Construct, Research Propositions, and Managerial Implications," *Journal of Marketing*, 54(April), 1-18.

- Akyol, A., Akehurst, G. (2003), "An investigation of export performance variations related to corporate export market orientation," *European Business Review*, 15, 5-20.
- Appiah-Adu, K., Blankson, C. (1998). "Business strategy, organizational culture, and market orientation," *International Business Review*, 40, 235-256.
- Arino, A., De la Torre, J., Ring, P.(2005). "Relational quality and inter-personal trust in strategic alliances," *European Management Review*, 2 (1), 15–27.
- Brouthers, K.D. and, G. Bamossy (2006). "Post formation processes in Eastern and Western European joint ventures," *Journal of Management Studies*, 43 (2), 203–229.
- Brouthers, K.D. and G. Nakos (2004). "SME entry mode choice and performance: a transaction cost perspective," *Entrepreneurship Theory and Practice*, 28, 229–247.
- Brush, G. J. (2000). "An Examination of Some Substantive Conditions for the Successful Establishment of Closer Collaborative Interorganisational Relationships in the Industrial Marketing Channels of Small Entrepreneurial Firms," paper presented at the International Council for Small Business (ICBS) World Conference, Brisbane, Queensland, Australia, June.
- Deshpande', R., Farley, J. U., and F. E. Webster (1993). "Corporate culture, customer orientation, and innovativeness in Japanese firms:A quadrad analysis," *Journal of Marketing*, 57,(January), 23– 57.
- George, G. Wiklund, J. and S. A. Zahra (2005). "Ownership and the internationalization of small firms," *Journal of Management*, 31, 225-241.
- Graebner, M.E. (2004) "Momentum and serendipity: How acquired leaders create value in the integration of technology firms," *Strategic Management Journal*, 25(8-9), 751—777.
- Granovetter, M. (2004). 'Business groups'. In N. Smelser and R. Swedberg (eds.), *Handbook of Economic Sociology*. Princeton University Press, Princeton, NJ, pp. 453–475.
- Hart, S. (1987). "The use of the survey in industrial market research," *Journal of Marketing Management*, 3(1), 25–38.
- Jaworski, B. J., and A. K. Kohli (1993). "Market orientation: Antecedents and consequences," *Journal of Marketing*, 57(July), 53– 70.
- Jaworski, B. J., Kohli, A. K., and A. Sahay (2000). "Market-driven versus driving markets," *Journal of the Academy of Marketing Science*, 28(1), 45–54.
- Johan, Wiklund and Dean A., Shepherd (2009), "The effectiveness of Alliances and Acquisitions: The role of Resource Combination Activities," *Entrepreneurship theory and Practice*, 54(January), 193-212.
- Karagozoglu, N., and M. Lindell (1998). "Internationalization of small and medium-sized technology-based firms," *Journal of Small Business Management*, 36(1), 44–60.
- Locander, W. B., Hamilton, F., Ladik, D., and J. Stuart (2000). "Developing a leadership-rich culture: The missing link to creating a market-focused organization," *Journal of Marketing-Focused Management*, 5, 149– 163.
- Lu, J. and P.W. Beamish (2001). "The internationalization and performance of SMEs," *Strategic Management Journal*, 22, 565–586.
- Pelham, A. M. (1999). "Influence of environment, strategy, and market orientation on performance in small manufacturing firms," *Journal of Business Research*, 45, 33–46.
- Robinson, J. P., Shaver, P. R., and L. S. Wrightsman (1991). 'Criteria for scale selection and evaluation'. In J. P. Robinson, P. R. Shaver, and L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes*. San Diego: Academic Press.

- Schumacker, R. E., and R. G. Lomax (1996). *A beginner's guide to structural equation modeling*. Mahwah, NJ: Erlbaum.
- Steensma, H. K., Marino, L., Weaver, K. M., and P. H. Dickson (2000). "The influence of national cultural on the formation of technology alliances by entrepreneurial firms," *Academy of Management Journal*, 43(5), 951-973.
- Voss, K., Johnson, J., Cullen, J., and T. Sakano (2006). "Relational exchange in US-Japanese marketing strategic alliances," *International Marketing Review*, 23 (6), 610–635.
- Wong, H. Y. and B. Merrilees, (2007). "Multiple roles for branding in international marketing," *International MarketingReview*, 24(4), 384–408.

***CHINESE AMERICAN INTERNET BANKING
ACCEPTANCE: IMPLICATIONS FOR
MULTICULTURAL MARKETING***

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CHINESE AMERICAN INTERNET BANKING ACCEPTANCE: IMPLICATIONS FOR MULTICULTURAL MARKETING

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Research in technology acceptance can have important implications for small businesses in developing global e-commerce strategies for market segments with more than one cultural identity. This paper focuses on the acceptance and marketing of Internet banking which has been the subject of several studies in Mainland China, Hong Kong, Taiwan, and the United States. For banks to attract the fast-growing Chinese American population, knowing the factors influencing Internet banking adoption is important. The survey (N=254 Chinese Americans) used demographic and attitudinal factors from the Davis Technology Acceptance Model and the Rogers Diffusion of Innovations Theory. Recommendations for online banking marketing are based on analysis supporting the significance of gender, language, and attitudinal factors. This study also supplies valuable information for researchers and practitioners about the Chinese-American multicultural market.

INTRODUCTION

Development of successful consumer service marketing strategies to multicultural market segments, or populations with multiple cultures in their background (Korzenny 2008), can be enhanced by technology acceptance studies. This study develops online banking marketing strategies using factors that affect the technology acceptance of Chinese American consumers who claim both Chinese and American cultures. Online or Internet banking allows consumers to perform banking transactions, including checking the balance in one's bank account, transferring funds between accounts, and bill paying, using a computer with an Internet connection.

Marketing efforts differ for various multicultural groups, particularly for Asian Americans, the "model minority" partly because of their above-average affluence and education, as compared to other ethnic groups in the U.S. (Cultural Access Group 2004; Wolburg 2007). Asian Americans are also the fastest growing segment in the United States on a percentage basis (Cultural Access Group 2004), yet are rarely approached despite their proximity to other American cultural groups (President's Advisory

Commission on Asian Americans and Pacific Islanders 2003). In the Asian American population, which has 29 sub-groups (Rossman 1994), the largest sub-group is the Chinese Americans, which accounted for more than 24% of the total Asian American population in the 2000 Census (Reeves and Bennett 2004). Burton (2005) points out that the various characteristics of a multicultural market segment could have significant marketing implications. Within the Chinese Americans sub-group, differences in reaction to a marketing strategy can be expected based on how long ago their family members emigrated and whether or not they became citizens (Wolburg 2007).

A 2001 Pew Internet study (Spooner 2001) showed that English-speaking Asian Americans were more likely to use the Internet and were the most active users as compared to other ethnic groups, including Caucasian Americans. The Cultural Access Group (2004) also indicated that 88% of Chinese Americans have a checking account, compared to 83% of Caucasian Americans. Such financial institution involvement makes Chinese Americans good candidates for online banking since a checking account is typically required to use online banking. However, if Chinese Americans perceive themselves to be outside the financial mainstream or *un-banked*, they could have concerns about banking and financial decisions (Rhine and Greene 2006).

This study employed a quantitative approach to examine demographic or objective characteristics (Burton 2005) and attitudinal factors suggested by technology acceptance studies. Market strategy was developed based on these factors, reflecting an ethno-consumeristic cross-cultural approach which views individuals as cultural beings with regard to personality, cognition, and behavior (Venkatesh 1995). The research questions in this study focused on (a) demographic and attitudinal factors influencing the behavior of Chinese Americans, (b) differences in factors between American-born and non-American born Chinese Americans, and (c) differences in factors Chinese Americans who prefer English and Chinese Americans who prefer a language other than English.

LITERATURE REVIEW

The model used most frequently in technology acceptance studies relating to online banking is the Technology Acceptance Model (TAM) (Davis 1989) or some modified version of the TAM. Studies using TAM surveying consumers in the U.S. (Fallows 2004; Hogarth, Kolodinsky, and Gabor 2006; Kolodinsky, Hogarth, and Hilgert 2004; Lassar, Manolis, and Lassar 2005) found that age, income, and education levels to have a statistically significant effect on adoption of online banking. Younger individuals with higher incomes, and higher levels of education were more likely to adopt online banking than were their older, lower income, and less educated counterparts. These studies also found that certain attitudes or perceptions positively influence adoption of this technology, including convenience, ease of use, relative advantage, and compatibility. Hogarth et al. also found that the issues of security and privacy were important in the adoption of payment technologies in general.

Studies of online banking adoption outside the United States include those done in China by Chan and Lu (2004), Laforet and Li (2005), Shih and Fang (2004), Wan, Luk, and Chow (2005), and Wang, Wang, Lin, and Tang (2003). Although the findings related to attitudes in these studies were similar to those in the U.S. studies, the demographic findings were somewhat different. Age, income level, and education level did not have the same impact in the studies done in China. This disagreement could be due to national factors such as the ones described in the study performed by Brown, Hoppe, Mugera, Newman and Stander (2004), including socioeconomic conditions and the extent of Internet adoption. Risk factors, primarily related to security and privacy, were important issues in all of the studies done in China.

DEMOGRAPHIC FACTORS

The results from studies that have examined the demographic factors affecting online banking adoption also have demonstrated some inconsistencies. Studies done in the United States have shown that age, income, and education tend to have a statistically significant impact on online banking adoption (Fallows 2004; Hogarth, et al. 2006; Kolodinsky, et al. 2004). These studies also showed no

significant relationship between gender and online banking adoption. However, Laforet and Li (2005) showed that Mainland China online banking users were predominately male but not necessarily younger, more highly educated, nor with higher income. In Hong Kong, Wan et al. (2005) showed only a slight difference in gender use of online banking, and that online banking adoption was more likely among those with moderate wealth and a moderate level of education. Other studies done in Singapore (Jaruwachirathanakul and Fink 2005) and Turkey (Howcroft, Hamilton, and Hewer 2002) found that online banking adopters are more likely to be male and younger (between 31 and 40). Because these differences may be attributable to either national or cultural differences, the demographics that affect online banking adoption by Chinese Americans are not known.

ATTITUDINAL FACTORS

Previous studies have shown that attitudinal factors (also referred to as perceptions, characteristics, or experiences) affect online banking adoption. Four factors have most frequently demonstrated statistically significant relationships with online banking adoption: perceived ease of use (PEOU), security, convenience, and computer self-efficacy. PEOU is the user's perception that online banking is easy for him or her to use. In this context, computer self-efficacy is a user's belief in his, or her, own ability to use a computer. These factors have demonstrated statistically significant relationships in studies performed in the U.S. (Hogarth, et al. 2006; Lasser, et al. 2005; Sarel and Marmorstein 2003), Singapore (Gerrard and Cunningham 2003), the United Kingdom (Howcroft, et al. 2002), Turkey (Akinici, Aksoy, and Atilgan 2004), and China (Chan and Lu 2004; Laforet and Li 2005; Wang, Wang, Lin, and Tang 2003). Other factors that have been identified in these studies are perceived usefulness, relative advantage, compatibility, and complexity (perceived ease of use).

THEORETICAL MODELS

The factors from two models, the Davis (1989) Technology Acceptance Model (TAM) and Rogers (2003) Diffusion of Innovations Theory (DOIT), were used in the U.S. by Kolodinsky et al.

(2003) and Lee et al. (2003). The results of these studies indicated that certain demographic and attitudinal factors influenced online banking adoption. These factors included education, income, compatibility, and relative advantage. However, Chinese Americans were not considered as a group, and their numbers were so small that they were included as part of a larger race/ethnicity group. Thus, while the findings were statistically significant, these findings did not necessarily apply to the Chinese American market segment. Despite the lack of one set of universally accepted factors related to online banking adoption, the TAM and DOIT offered a promising framework for further study. In addition to the five factors in Rogers' DOIT model, security and perceived usefulness were factors examined in the Kolodinsky et al. and Lee et al. studies. These factors are ones that were consistently shown to have some influence on the intention to adopt and the actual adoption of online banking.

METHODOLOGY

The existing multicultural marketing research is highly quantitative in its approach and therefore reflects the bias of mainstream marketing research with surveys being used as the most widely used methodological approach (Burton 2005). A quantitative methodology was also used in this study since the intent of the study was to generalize the results to a larger metropolitan population. The population studied was the Chinese American population in the Chicago metropolitan area, which included Cook, DuPage, Lake, and Will counties. This population consisted of 66,051 people according to the 2000 U.S. Census report. Leaders from 16 different community groups and organizations with primarily Chinese American members, clients, volunteers, and/or employees were approached in order to obtain surveys from each group. In addition, because the employees, members, volunteers, and clients of these organizations were primarily located in Cook County, additional participants were obtained from employees and customers in a DuPage County suburban mall.

The researcher developed a survey instrument to gather demographic and attitudinal data. The statements and questions included in the survey were suggested by items included on a questionnaire

administered by the Survey Research Center at the University of Michigan (1999 and 2003), and adapted here with the kind permission of Dr. Jeanne M. Hogarth. The survey instrument used to collect data for this study was initially developed in English. The questions and statements used by the Survey Research Center in their survey were developed primarily from other studies where they demonstrated validity and reliability.

Previous scientific studies done in the United States that included Chinese Americans were conducted in English, either through the use of oral interviews or written questionnaires. The language used in the written survey for this study was important because 73% of the population studied was foreign-born and 88% of the same population of those five years of age or older spoke a language other than English in their home, according to the 2000 U.S. Census. These facts led to the conclusion that the written survey used in this study should be available in both English and Chinese in order to have the best chance of reaching a representative sample of this population. Thus, the English version of the survey was translated into a version printed in Traditional Chinese (Gibson 2007).

One of the primary objectives of this study was to determine what demographic and attitudinal factors affect online or Internet banking adoption. The dependent variable that addressed this objective was intention to use Internet banking. This study provided for multiple values based upon a 7-point Likert scale response to the question, "How likely are you to use Internet banking in the next twelve months?" The responses ranged from *definitely will not* to *definitely will* and were coded sequentially from 1 to 7, respectively. There were 15 independent demographic variables examined in this study. The demographic variables include PC (personal computer) access, Internet access/connection/use, gender, marital status, age, income, education, birthplace, primary language, and occupation. In addition, responses to 15 attitudinal statements and their relationships to the dependent variable were examined.

One-way ANOVA was used test for relationships between the demographic variables and intent to use Internet banking, and correlation analysis followed by multiple linear regressions was

used to test for relationships between the attitudinal variables and the intent to use Internet banking. These same analyses were used to examine the intent of the sub-groups to use Internet banking.

RESULTS

There were 279 surveys collected, and the participants identified their ethnicity as Chinese American on 254 of them. A detailed breakdown of the sample is provided in Table 1. This sample, while not random, was diverse and could be considered representative of the general population.

TABLE 1

RESEARCH SAMPLE CHARACTERISTICS (AS PERCENT OF RESPONDENTS)

Survey language	46.5 English; 53.5 Chinese
PC owner or access	87
Internet access at home	77
Internet connection type	58 had high speed
Length of time using Internet	54 over three years
Frequency of using the Internet	58 used Internet one or more times per day
Used Internet banking in last 12 months	38
Gender	38 male; 62 female
Age	24, 18-34; 23, 35-44; 25, 45-54; 28, 55 and up
Marital Status	71 married; 21 never married; 8 other
Birth Country	80 China; 11 USA; 9 other
Primary language spoken at home	78 Chinese; 12 English; 10 other
County of residence	83 Cook; 12 DuPage; 5 other
Highest level of education	16 less than high school; 23 high school; 17 tech school or some college; 44 college graduate or higher
Primary school attended where	20 USA only; 11 China and USA; 48 China only; 21 other
Household income	33,0-\$24,999; 32, \$25,000-\$49,999; 35, \$50,000 or more
Job or profession	29 laborer or clerk; 26.5 manager or professional; 6 student; 6 homemaker; 5 unemployed; 9 retired; 18.5 other

One-way ANOVA revealed that 12 of the 15 demographic factors demonstrated statistically significant relationship with participants' intent to use Internet banking. These 12 factors, along with the statistical significance they demonstrated, are included in Table 2. The six factors related to

PC/Internet access and uses were the most significant followed by age, education, survey language, gender, household income, and country of birth. Participants who used Internet banking in the last 12 months were the most likely to intend to use Internet banking within the next 12 months. More access to the Internet and more experience in using the Internet were also positively related to the intent to use Internet banking.

TABLE 2

ONE- WAY ANOVA INTENT TO USE BY DEMOGRAPHIC FACTORS

DEMOGRAPHIC FACTORS	ATTRIBUTES	MEAN SCORES
Age F(3,240)=12.75; p<.001	18-34 ^a	5.58 ^d
	35-44 ^b	5.23 ^d
	45-54 ^c	4.70 ^d
	55+ ^d	3.54 ^{a,b,c}
Education level F(4,231)=6.88; p<.001	Less than high school ^a	3.94 ^{d,e}
	High school ^b	4.02 ^{d,e}
	Some college or tech school ^c	4.62
	College graduate ^d	5.46 ^{a,b}
	Post graduate degree ^e	5.66 ^{a,b}
Gender F(1,245)=6.84; p=.009	Female	5.00
	Male	4.28
Household income F(3,216)=3.45; p=.017	0-\$24,999 ^a	4.33 ^d
	\$25,000-\$49,999 ^b	4.77
	\$50,000-\$74,999 ^c	5.37
	\$75,000 or greater ^d	5.47 ^a
Survey in English or Chinese F(1,246)=7.78; p=.006	English	5.11
	Chinese	4.36
Country of birth F(2,245)=3.04; p=.05	Hong Kong or USA	5.20
	Mainland China or Taiwan	4.59
	Other	4.09
Have used Internet banking F(1,246)=142.26; p<.001	Yes	6.34
	No	3.69
Own or have access to a PC F(1,246)=31.95; p<.001	Yes	4.99
	No	2.77
Type of Internet access F(2,226)=26.31; p<.001	High speed ^a	5.14 ^{b,c}
	Dial Up ^b	4.61 ^{a,c}
	No access ^c	2.74 ^{a,b}
How long using the Internet F(3,240)=17.23; p<.001	Never used ^a	3.07 ^{b,c,d}
	< 1 year ^b	4.33 ^{a,d}
	1 to 3 years ^c	4.58 ^a
	3 or more years ^d	5.45 ^{a,b}
Where do you have Internet access F(3,239)=16.24; p<.001	Home plus ^a	5.68 ^{b,c,d}
	Home only ^b	4.51 ^{a,d}

	Other ^c	4.29 ^a
	No access ^d	2.97 ^{a,b}
How often do you access the Internet	Never accessed ^a	3.07 ^{c,d,e}
F(4,242)=15.99; p<.001	< = Once a week ^b	4.25 ^e
	3-5 times a week ^c	4.37 ^{a,e}
	Once a day ^d	4.40 ^{a,e}
	> Once a day ^e	5.66 ^{a,b,c,d}

Note. The superscripts in the far right column indicate statistically significant differences between attributes from the Bonferroni procedure.

Education level and household income were both positively related to intent to use Internet banking, while age was inversely related. The results also showed that females and participants who completed the English version of the survey scored higher than their counterparts in their intent to use Internet banking within the next 12 months. A correlation analysis revealed that all 15 of the attitudinal statements had a statistically significant relationship with the dependent variable, *intent to use*. The results of this initial analysis are detailed in Table 3.

TABLE 3
CORRELATION ANALYSIS BETWEEN INTENT TO USE AND
ATTITUDINAL STATEMENTS

ATTITUDINAL STATEMENT	PEARSON CORRELATION	SIGNIFICANCE (1-tailed)	N
There are enough advantages of Internet banking for me to consider using it.	.503	<.001	238
I have the opportunity to try Internet Banking	.476	<.001	239
Internet banking helps me to better manage my personal finances.	.476	<.001	239
Internet banking is convenient.	.406	<.001	238
I feel comfortable providing personal information through Internet banking.	.315	<.001	236
When I use Internet banking, my money is as safe as when I use other banking services.	.265	<.001	240
I have seen how others use Internet banking.	.244	<.001	242
I need to familiarize myself with Internet banking	.121	.031	238

technology.			
Internet banking is difficult to use.	-.301	<.001	234
It bothers me to use a machine for banking transactions when I could talk with a person instead.	-.277	<.001	237
Mistakes are more likely to occur with Internet banking than with regular banking.	-.273	<.001	235
I worry that Internet banking is not secure enough and I could lose money.	-.258	<.001	239
Mistakes with Internet banking are more difficult to get corrected than with regular banking.	-.248	<.001	237
I worry that Internet banking is not secure enough to protect my personal financial information.	-.137	.017	240
I worry about the privacy of my information when using Internet banking.	-.114	.040	239

The differences between American born and non-American born Chinese Americans in demographic and attitudinal factors that influence intent to use Internet banking were not significant. However, an analysis of the difference between the participants' responses to the English and Chinese versions of the survey revealed that age was significant in the English sub-group, but not in the Chinese sub-group. There were only minor differences in the order of significance of the demographic factors between these two sub-groups.

There were several differences between the survey language sub-groups in terms of the attitudinal statements related to intent to use Internet banking. The analysis of the responses to the Chinese version showed that 10 out of the 15 statements exhibited significance while 13 of 15 did with the English version. The statements where there were differences and the corresponding correlation results are detailed in Table 4.

TABLE 4

COMPARISON OF CORRELATION ANALYSES BETWEEN INTENT TO USE AND ATTITUDINAL STATEMENTS FOR CHINESE VERSION AND ENGLISH VERSION

ATTITUDINAL STATEMENT	SIGNIFICANCE (1-TAILED)	
	PEARSON CORRELATION	
	CHINESE	ENGLISH
I need to familiarize myself with Internet banking technology.	.254**	.085
When I use Internet banking, my money is as safe as when I use other banking services.	.142	.414***
It bothers me to use a machine for banking transactions when I could talk with a person instead.	-.132	-.426***
I worry that Internet banking is not secure enough to protect my personal information.	-.106	-.149
I have seen how others use Internet banking.	.099	.388***
I worry about the privacy of my information when using internet banking	.016	-.215*

Note. * p<.05; ** p<.01; *** p<.001.

DISCUSSION

The results revealed that 12 of the 15 demographic factors exhibited statistically significant relationships with the dependent variable, *intent to use Internet banking*. In addition, all 15 attitudinal statements related to the six factors demonstrated a statistically significant relationship with the dependent variable. The relationships of several of the demographic factors with *intent to use Internet banking* were consistent with previous studies performed in the United States. All six of the PC/Internet related factors demonstrated statistical significance, with prior use of Internet banking having the most significant influence. These findings are consistent with those in studies done in the U.S. by Lee, Lee, and Eastwood (2003), and Lassar et al. (2005). In both of these studies heavier computer and Internet use and a higher comfort level with technology were related to a stronger likelihood of Internet banking adoption. This was also the case in the study performed by Laforet and Li (2005) in Mainland China.

The results of this study indicated that age, education, and household income all had a significant relationship with the intent to use Internet banking. A younger age group with a higher level of education and higher household income were more likely to intend to use Internet banking. These findings are consistent with those in studies done in the U.S. by Hogarth et al. (2006), Kolodinsky et al. (2004), and Lee et al. (2003). However, the results of this study differed from those in the study by Lassar et al. (2005) that indicated that while income had a significant relationship with Internet banking adoption, age, and education did not. In addition, the study performed in China by Laforet and Li (2005) indicated that education was not a significant factor related to Internet banking adoption.

Two results of this study that differed from previously referenced studies were (a) gender was a significant factor related to intent to use Internet banking and (b) females were more likely to intend to use Internet banking than males. Previous studies indicated that gender was either not a significant factor or males were the more likely users of Internet banking. However, a study of Australian banking consumers by Lichtenstein and Williamson (2006) indicated that female Internet banking users valued convenience above other characteristics, particularly working mothers. This is consistent with the results of this study of Chinese Americans, because the sample had a high percentage of working (77%) and married (72%) women.

Unlike previous studies, this study also examined cultural/language factors related to Internet banking use. The results related to country of birth and primary language were both mixed. While country of birth demonstrated statistical significance related to intent to use, the results were not compelling and there was no significant difference in the results between U.S. and foreign-born participants. Whereas the primary language spoken at home did not demonstrate a significant relationship with intent to use Internet banking, the language of the survey did, with several significant differences in the results for those that completed the English version as compared to the results of those that completed the Chinese version. Given the many multiple responses to the primary language

question, the language (Chinese or English) of the survey completed by each participant was believed to be more indicative of the preferred language of the participants. In addition, the author's personal experience indicates that individuals who are comfortable completing a survey in Chinese are comfortable with the spoken Chinese language as well. However, individuals comfortable with the spoken Chinese language are not necessarily comfortable completing a survey printed in Chinese.

The findings pertaining to the attitudinal factors in this study were consistent with the theories and models developed as part of the Davis TAM and the Rogers DOIT. These factors include perceived ease of use/compatibility/complexity, perceived usefulness, perceived risk/security, perceived reliability/relative advantage, trialability, and observability. Further analysis using multiple linear regression revealed that perceived usefulness and trialability were the two most significant factors related to intent to use Internet banking. These two factors were followed by perceived reliability/relative advantage and perceived risk/security. Perceived usefulness, perceived risk/security, and perceived reliability/relative advantage have demonstrated significance in several of the studies referred to in this paper (Chan and Lu 2004; Davis 1989; Hogarth, et al. 2006; Kolodinsky, et al. 2004; Lee, et al. 2003; Lichtenstein and Williamson 2006; Wan, et al. 2005; Wang, et al 2003). However, the results related to trialability have been mixed, demonstrating significance in the study by Lee et al. (2003), but not in the study by Kolodinsky et al. (2004).

The six attitudinal statements that were the most significant in the multiple regression analysis relate to four attitudinal factors as detailed in Table 2. The first two factors, perceived usefulness and perceived risk/security, are related to the TAM or a modified version of it. The other two factors, perceived reliability/relative advantage and trialability, are related to the model developed from DOIT. All three of the statements associated with perceived usefulness are included in these six statements supporting its use in the TAM.

The demographic characteristics of the sample used in this study were similar to those of the target population. However, the sample was not random; rather it was the result of a series of

convenience samples. Because of this, general conclusions about the target Chinese American population in the Chicago area cannot be drawn. In addition, the data were subject to interpretation because of language and cultural differences. Every attempt was made to minimize these interpretational differences by using two versions of the survey instrument, Chinese and English.

MARKETING INTERNET BANKING TO MULTICULTURES

The results of this study indicate that offering Internet banking is important for a bank that is attempting to attract Chinese Americans as customers in the Chicago area. There was a high correlation between responses in the survey to the question, “For me to choose a bank as my primary bank, how important is it that the bank offers Internet banking?” and “How likely are you to use Internet banking in the next 12 months?” In addition, 61% of the total participants responded that they were somewhat likely to use Internet banking in the next 12 months, very likely, or definitely would. This leads to the conclusion that Internet banking is a service that may help to attract Chinese American customers.

The next question to address is how can Internet banking best be marketed in order to maximize its effect on bank revenues? First, the target audience should be identified. In the case of this market segment, the initial focus should be on current and experienced computer and Internet users. The most likely users of Internet banking among this group include age groups up to 55 years of age with higher income (\$50,000 and over) and a college or post-graduate education. When attempting to reach these individuals, it would be important to take certain findings of this study into account.

When attempting to reach out to individuals who prefer to receive material in Chinese, age may not be a significant factor, as indicated by the results from the participants that completed the Chinese version of the survey. In addition, the population aged 55 and older, in particular, the group aged 55 to

64, should not be ignored. According to the results of this study, there was not a significant difference between participants from the aged 55 to 64 group and the groups aged 18 to 24 and 45 to 54.

When attempting to reach the higher income households, care should be taken as to what types of marketing lists are used because many households may consist of extended families where the household income consists of more than two individual incomes that can easily aggregate to more than \$50,000. In addition, households that do not report or under report income should not be ignored. In the survey, the income question was the one least answered. When certain sub-groups were examined, such as those who completed the Chinese version of the survey, household income was not a significant factor. One reason for this may have been that some participants under-reported their household income. This would result in a larger number of lower-income participants who would be likely to intend to use Internet banking. Individuals in this population segment routinely under-report income.

The education level of potential users and customers can also be misleading. Targeting only U.S. college graduates ignores the segment of this population that have college degrees and post graduate degrees that were earned outside of the U.S. While this issue was not addressed in this study, it may be one to consider from a marketing standpoint. In addition, the results of this study showed that there was not a significant difference in responses to the intent to use Internet banking between participants that had a college or post-graduate degree and those that had completed some college, a technical school degree, or an associate's degree.

A successful strategy for marketing Internet banking should also consider the attitudinal factors and statements that demonstrated statistical significance in this study. These factors are examined here beginning with perceived usefulness. This factor addresses the general advantages of Internet banking, including how convenient it is, and that Internet banking can help someone better manage their personal finances. This suggests that marketing literature for an Internet banking product should emphasize these characteristics. In addition, the design of the Internet program should allow for

integration of all bank accounts and loans, as well as other investments, in order to make the program more convenient for the user to help the user better manage all of their personal finances. The program could also provide for rewards like cash back for each bill paid through Internet banking as a further advantage to using this product.

Secondly, a successful marketing strategy should consider trialability. According to Rogers (2003), “trialability is the degree to which an innovation may be experimented with on a limited basis” (p. 16). This factor and the underlying statement in the survey had the second highest correlation with the intent to use Internet banking. This factor can be addressed in two different ways. Demonstrations could be set up in each of the bank’s branch offices so that existing and prospective customers can have the opportunity to try Internet banking with a customer service representative there to assist them or answer any questions they may have. This service could also be included in the bank’s marketing literature. Another approach to induce individuals to try the bank’s Internet banking product is to offer some type of contest or reward for just trying the product.

The third factor to address for successfully implementing Internet banking is perceived reliability/relative advantage. The specific statement that was significant in the survey was, “Mistakes with Internet banking are more difficult to get corrected than with regular banking.” This could be addressed by providing a customer service representative whose primary duty was to correct any errors that may occur. This service could also be part of the marketing literature including a toll free telephone number to call for assistance.

The final attitudinal factor that affects successfully implementing Internet banking is the issue of perceived risk/security. The specific statement that was significant in the survey was, “I worry that Internet banking is not secure enough to protect my personal financial information.” This issue should be addressed in the marketing literature and on the Internet banking website including the prominent display of security safeguards with particular emphasis on the security measures that are used in this regard. While this approach cannot address everyone’s concerns, the results of this study indicate that

this issue deserves specific attention and emphasis. The approaches to Internet banking implementation suggested here are not solutions to all of the issues that were raised in this study, but could go a long way toward addressing ones that seem to be of particular interest or concern to the targeted population.

The issue of gender differences in Internet banking adoption is one that may relate to the issue of a multicultural population. The results in this study indicate that gender had a significant influence on intent to use Internet banking and that females were more likely to intend to use it. This result differed from the results of other studies of native and single culture populations and may have its roots in the attitudes of working women and working mothers in U.S. culture seeking convenience. In any event, it deserves further study.

Overall this study provides a first look at Internet banking adoption by a Chinese American population in the United States. Many issues have arisen from the study that should be addressed in future studies. The effect of language on Internet banking adoption by Chinese Americans is one that should be further addressed. The results in this study related to language were mixed, and the significance of language related to adoption was unclear. In addition, language options on an Internet banking website were not studied here and could be part of a future study.

Several additional issues arose during the course of this study that should be considered for future studies. These issues include income reporting, differences in college degrees, size of households, and regional differences. The first two issues may have their roots in multiculturalism. This study suggests that there may be some issues regarding the accuracy of household incomes reported and differences in technology adoption between individuals who received their college degrees in the U.S. versus other countries. The other two areas not addressed in this study, size of household and regional differences, are ones that also bear further study.

REFERENCES

- Akinci, Serkan, Safak Aksoy, and Eda Atilgan (2004). "Adoption of Internet Banking Among Sophisticated Consumer Segments in an Advanced Developing Country," *The International Journal of Bank Marketing*, 22 (2/3), 212-232.
- Brown, Irwin, Rudi Hoppe, Pauline Muger, Paul Newman, and Adrie Stander (2004). "The Impact of National Environment on the Adoption of Internet Banking: Comparing Singapore and South Africa," *Journal of Global Information Management*, 12 (2), 1-26.
- Burton, Dawn (2005). "New Course Development in Multicultural Marketing," *Journal of Marketing Education*, 27 (2), 151-162.
- Chan, Siu-cheung, and Ming-te Lu (2004). "Understanding Internet banking Adoption and Use Behavior: A Hong Kong Perspective," *Journal of Global Information Management*, 12 (3), 21-43.
- Cultural Access Group (2004). "Asian American Market Report." <www.accesscag.com>. Accessed on Feb. 22, 2005.
- Davis, Fred (1989). "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology," *MIS Quarterly*, 13 (3), 319-340.
- Fallows, Deborah (2004). "The Internet and Daily Life." *Pew Internet & American Life*. <www.pewinternet.org>. Accessed on Oct. 11, 2005.
- Gerrard, Philip, and J. Barton Cunningham (2003). "The Diffusion of Internet Banking Among Singapore Consumers," *The International Journal of Bank Marketing*, 21 (1), 16-28.
- Gibson, L. G. (2007). "Research Design for Assessing Attitudes in Technology Acceptance: Chinese Americans and Internet banking," *Information Systems Education Journal*, 5 (34), 539-549.
- Hogarth, Jeanne M., Jane M. Kolodinsky, and Tatiana Gabor (2006). "Consumer Payment Choices: Paper, Plastic – or Electrons?" *Consumer Interests Annual*, 52, 1-14.
- Howcroft, Barry, Robert Hamilton, and Paul Hower (2002). "Consumer Attitude and the Usage and Adoption of Home-Based Banking," *Marketing*, 20 (2/3), 111-121.
- Jaruwachirathanakul, Bussakom, and Dieter Fink. (2005). "Internet Banking Adoption Strategies for a Developing Country: The Case of Thailand," *The International Journal of Bank Marketing*, 15, 295-311.
- Kolodinsky, Jane M., Jeanne M. Hogarth, and Marianne Hilgert (2004). "The Adoption of Electronic Banking Technologies by U.S. Consumers," *The International Journal of Bank Marketing*, 22 (4/5), 238-259.
- Korzenny, Felipe (2008). "Multicultural Marketing and the Reasons Why," *Journal of Advertising Research*, 48 (2), 173-176.

- Laforet, Sylvie, and Xiaoyan Li (2005). "Consumers' Attitudes Towards Online and Mobile Banking in China," *The International Journal of Bank Marketing*, 23 (5), 362-380.
- Lassar, Walfried, Chris Manolis, and Sharon S. Lassar (2005). "The Relationship Between Consumer Innovativeness, Personal characteristics, and Online Banking Adoption," *The International Journal of Bank Marketing*, 23 (2/3), 176-199.
- Lee, Eun-Ju., Jim Kook Lee, and David Eastwood (2003). "A Two-Step Estimation of Consumer Adoption of Technology-Based Service Innovations," *The Journal of Consumer Affairs*, 37 (2), 256-282.
- Lichtenstein, Sharman, and Kirsty Williamson (2006). "Understanding Consumer Adoption of Internet Banking: An Interpretive Study in the Australian Banking Context," *Journal of Electronic Commerce Research*, 7 (2), 50-66.
- President's Advisory Commission on Asian Americans and Pacific Islanders (2003). *Asian Americans and Pacific Islanders Addressing Health Disparities: Opportunities for Building a Healthier America*. Washington, DC: U.S. Government Printing Office.
- Reeves, Terrance J., and Claudette E. Bennett. (2004). *We the People: Asians in the U.S.* Washington, DC: U.S. Census Bureau.
- Rhine, Sherrie L. W., and William H. Greene (2006). "The Determinants of Being Unbanked for US Immigrants," *Journal of Consumer Affairs*, 40, 21-40.
- Rogers, Everett M. (2003). *Diffusion of Innovations* (5th ed.). New York, NY: Free Press.
- Rossman, Marlene L. (1994). *Multicultural Marketing: Selling to a Diverse America*. New York: American Marketing Association.
- Sarel, Dan, and Howard Marmorstein (2003). "Marketing Online Banking Services: The Voice of the Customer," *Journal of Financial Services Marketing*, 8 (2), 106-118.
- Shih, Ya-Yueh, and Kwoting Fang (2004). "The Use of a Decomposed Theory of Planned Behavior to Study Internet Banking in Taiwan," *Internet Research*, 14 (3), 213-223.
- Spooner, Tom (2001). "Asian-Americans and the Internet: The Young and the Connected." *Pew Internet & American Life*. <www.pewinternet.org>. Accessed on Oct. 11, 2005.
- U.S. Census Bureau (2000). "American Fact-Finder Summary Files, 2000." <<http://factfinder.census.gov>>. Accessed on Sept. 11, 2006.
- Venkatesh, Alladi (1995). "Ethnoconsumerism: A New Paradigm to Study Cultural and Cross-Cultural Consumer Behavior," in *Marketing in a Multicultural World*. Ed. Janeen A. Costa and Gary J. Bamossy. London: Sage Publications, Inc.
- Wan, Wendy W. N., Chung-Leung Luk, and Cheris W. C. Chow (2005). "Customers' Adoption of Banking Channels in Hong Kong," *The International Journal of Bank Marketing*, 23 (2/3), 255-272.

Wang, Yi-shun, Yu-min Wang, Hsin-hui Lin, and Tzung-I Tang (2003). "Determinants of User Acceptance of Internet Banking: An Empirical Study," *Internet Research*, 14 (5), 501-519.

Wolburg, Joyce M. (2007). "Playing the Zero-Sum Game with Diversity: Who's the Worthiest of Them All?" *The Journal of Consumer Marketing*, 24 (5), 261-263.

Global Entrepreneurial Capabilities: Korean High-tech SMEs

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Abstract

The major function of a high-tech and global entrepreneurial firm is to seek for new opportunities in the global markets—and accordingly, design, develop and market a new product or service to satisfy and exploit the opportunity. To do so, the firm needs global entrepreneurial capabilities that enable the firm to be globally competitive. Four case studies are conducted on high-tech firms in Korea that have successfully designed, developed, and commercialized new high-tech products in the global markets. The findings of the research show that the common denominator among these firms include prior technological capabilities of the company's founders; social network building capabilities; in-house product design and development capabilities; outsourcing capabilities; and cross-cultural relationship building capabilities.

Introduction

Large Korean companies, like Samsung and LG Electronics, are globally competitive companies. For instance, in 2008, Samsung with 13.8 percent global cell phone market share, superseded Motorola and after Nokia became the world's number 2 cell phone maker (forbes.com). At the same time, however, small and medium-sized (SEM) high-tech Korean companies, particularly small companies, are not globally competitive. For instance, out of 62,242 small and medium-sized companies (companies with 10 to 250 employees) in Korea, only 10,052 companies, 16 percent, export products and services to the other countries.

High-tech firms are companies that are involved in design, development, and production of technology-driven products or services that have new technological attractiveness to customers and users. Korean high-tech firms are facing fierce competition from global competitors. Thus, to survive, even in domestic markets, they need to be globally competitive as well.

Global competitiveness is the company's ability to perform better than average competitors in the global markets—in other words, to outperform competitors in the global markets. It is argued in this study that global competitiveness is intertwined with the firm's entrepreneurial capability. Based on a literature survey and a pilot exploratory research, a theoretical model (Figure 1) is developed. To test the model, four case studies are conducting on high-tech and global firms in Korea. This study tends to contribute to the extant body of knowledge on high-tech entrepreneurial firms, particularly, global high-tech entrepreneurial firms.

Theoretical Background

The unit of analysis in this study is high-tech small and medium-sized (SME) entrepreneurial firm. The units of observation are the entrepreneurial capabilities and the performance of the firm. The performance of the firm here is referred to entrepreneurial rents (also called Schumpeterian rents). The entrepreneurial rents is earned by the entrepreneurial firm through the creation of a new high-tech product or service; and the introduction and marketing the new product or service in the global markets.

Prior to the empirical research, a theoretical model (Figure 1) was developed. In this model, entrepreneurial performance is based on entrepreneurial capabilities that consist of five factors: capabilities of identifying opportunities in global markets, capabilities to build an entrepreneurial organization, capabilities to innovate and make a new high-tech product or service, capabilities to build global connections, and capabilities to commercialize the new product or service in the global markets.

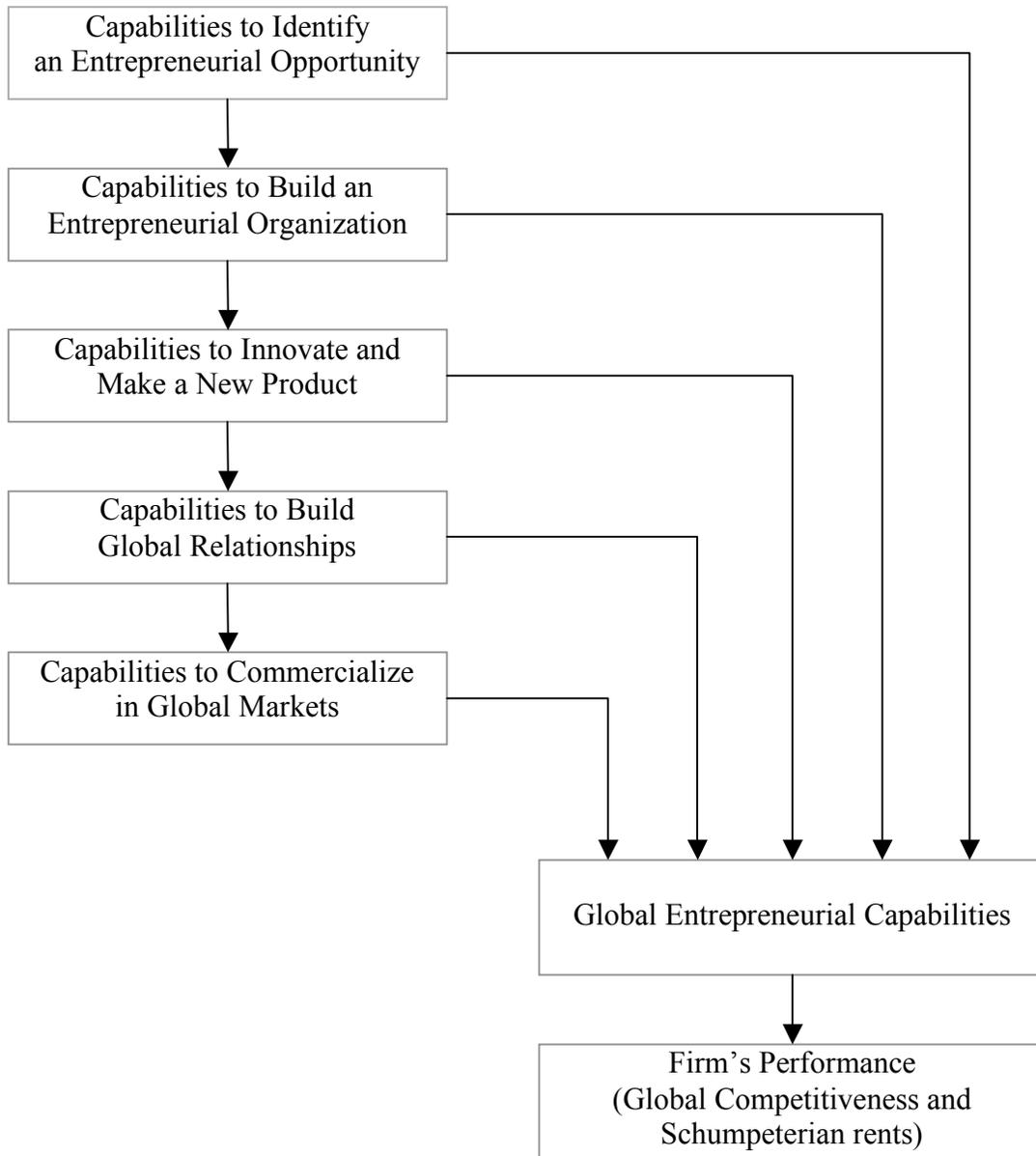


Figure 1: Global Entrepreneurial Capabilities

Entrepreneurial Capabilities

There is a consensus in the literature that, either as a pattern of individual behavior or as a set of organizational behavior, entrepreneurship is a process for identifying and exploiting opportunities in the market (Baron and Shane, 2009; Davidsson, 2004; Drucker, 1985; Ireland et al., 2009; Shane and Venkataraman, 2000; Zahra et al., 2006). For instance, Ireland et al., 2009, define entrepreneurship as “a process by which individuals and groups identify and pursue entrepreneurial opportunities without being immediately constrained by the resources they currently control—where entrepreneurial opportunities are conditions in which new goods or

services can satisfy a need in the market” (p. 369). Similarly, Baron and Shane, 2009, define entrepreneurship as “a field of business that seeks to understand how opportunities to create new products or services arise and are discovered or created by specific individuals, who then use various means to exploit or develop them” (p. 30).

When entrepreneurship is a process, then entrepreneurial capabilities can be seen as the ability of an individual or an organization to develop, modify, manage, and utilize this process towards a desirable outcome. Since the firm is an entrepreneurial firm, the desirable outcome is an entrepreneurial or Schumpeterian rents. Schumpeterian rents can be divided into Austrian rents and Ricardian rents. Austrian rents, also known as economic profit, which can be bid or incrementally competed away over time, whereas Ricardian rents, which are payments to resources or capabilities that are unique to the firm and cannot be incrementally dissipated (Darroch et al., 2005: 1438).

To assess entrepreneurial capabilities, a suitable firm theory that can be applied is dynamic capability. As Blyler and Coff (2003) argue, dynamic capabilities afford a unique opportunity to explore rent appropriation in a volatile environment – such as high-tech firms’ environments. This is primarily because dynamic capability is an extension of resource-based theory of the firm (Eisenhardt and Martin, 2000). In resource-based theory, a firm is viewed as a bundle of scarce resources and capabilities that the greater value generated is viewed as *rent* to these critical resources and capabilities (Barney and Clark, 2007: 28).

In view of that the firm is a bundle of scarce resources and capabilities, a dynamic capability is defined as the ability of the firm to purposefully create, extend, or modify its resource base to address a rapidly changing environment (Helfat et al., 2007; Teece et al., 1997). The “resource base” of an organization includes tangible, intangible, and human assets (or resources) as well as capabilities which the organization owns, controls, or has access to on a preferential basis (Helfat et al., 2007: 4). Accordingly, “entrepreneurial capabilities can be seen as the ability to identify a new opportunity and develop the resource base needed to pursue the opportunity” (Arthurs and Busenitz, 2006:199).

If we consider dynamic capabilities as the entire organizational capabilities that enable the firm to modify and extend its resources base, entrepreneurial capabilities become part of the firm’s larger set of dynamic capabilities. Entrepreneurial capabilities are linear, where opportunity is positioned as the reference point for decision makers (Arthurs and Busenitz, 2006). However, since dynamic capabilities need to be adaptive to the changes in the environment (Teece et al., 1997), they are circular or recursive. Therefore, entrepreneurial capabilities include only the linear part of the firm’s larger set of dynamic capabilities.

Eisenhardt and Martin (2000) and Zahra and George (2002) argue that there is some creative tension in the argument that dynamic capabilities *per se* would not allow firms to sustain a competitive advantage. Wheeler (2002) also argues that “dynamic capabilities are not in themselves a source of long-term competitive advantage—they are a means for achieving resource configurations that provide advantage, though possibly short term, in the marketplace based on Schumpeterian rents as market opportunities emerge, collide, evolve, and die” (p. 128). As discussed above, however, in entrepreneurial firms, the desirable outcome is Schumpeterian

rents not necessarily sustainable competitive advantage. Thus, dynamic capability is a suitable theory for conceptualizing entrepreneurial capabilities, particularly, entrepreneurial capabilities in high-tech firms with volatile environments.

Empirical Research

The target population of this study is small and medium-sized (SME) high-tech, global, and entrepreneurial firms in Korea. Small and medium-sized firms are referred to firms with minimum 10 and maximum 250 full-time employees. High-tech, or high-technology, firms are referred to firms that use new and cutting edge technologies in their fields to design, develop, and produce their products and services. Examples include product design and development firms in biotechnology, wireless communication, medical instrumentation, and aerospace industries. A global firm refers to a firm that designs and develops high-tech products and services that are successfully marketed and commercialized, not only in its domestic market, but also in global markets. An entrepreneurial firm refers to a firm that its major function is seek for new opportunities and, accordingly, design, develop, and commercialize new products or services for exploiting the opportunity.

Based on these criteria, KORCHAMBIZ website, the Korea Chamber of Commerce and Industry (KCCI) website, was searched to find firms that match the sampling criteria. After searching this database, 11 companies in Daejeon, Yuseong-gu district, known for high tech industries and Daedeok Science Valley, matched the criteria. Then, four companies were randomly chosen for conducting the case studies.

Prior to conducting the case studies, based on the theoretical model (Figure 1), a research model and a questionnaire with open-ended questions were developed (please see Appendix A and B). For wording and content suitability, before conducting the case studies, both the research model and the questionnaire were tested with another high-tech company. The questionnaire then was translated into Korean language in order to make the face-to-face interviews smoother and enable the researcher to collect richer data. The questionnaire intended to answer five major questions:

1. how the company under study identified its opportunities,
2. how the company was built,
3. how the company's new product or service was designed and developed,
4. how its global connections were made, and
5. how its new product or service was commercialized in the global markets?

Cases Studies

Case 1: Teltron Inc.

Teltron Inc. was established in 2001 with 798 million KRW¹ capital fund. Currently, the company employees 12 full-time employees and has 908 million KRW capital asset. In 2007, the company's net sales was 1,700 million KRW and in 2008, it exceeded 1,962 million KRW (15.5 percent increase).

¹ 1 US Dollar (USD) = 1282 Korean Won (KRW), April 30, 2009, Reuters

Teltron Inc. designs, develops, and manufactures microwave motion sensors, heart beat counter, real-time bacteria detector, and RF phase shifter. Their customers are business customers; therefore, their nature of their product marketing is business-to-business (B2B). The company has customers in Korea, China, Canada, and the U.S.A.

Answers to research questions:

1. The founder, the current CEO, of the company has a PhD in physics. Prior to starting this company, he worked in electronic and telecommunication R&D jobs for 15 years. This led him to come up with the new product idea, which was how to detect motion from changes in electromagnetic waves.

Thus, the origin of their new product idea was changes in electronic technologies. These changes enabled him to design an electronic radar and antenna for detecting motions by detecting the changes in the electromagnetic waves surrounding the object. With this radar and antenna it is possible to detect and record even tiny motions such as heart bits or breathing bits.

2. Half of their start-up finances came from personal savings of the company's founders, including the current CEO. And the other half came from venture capital financing. For their staffing, in the beginning, they hired 3 key people who had more than 7 years R&D and product design and development experience. These people prior to joining the company worked in the same company where the current CEO used to work. The overall management of the company is done by the investors. However, the operational management is divided into different areas, for instance, R&D and marketing areas are managed separately.
3. The product idea was generated in-house. Their first prototype was also made in-house and their technical testing and customer testing all are done in-house. However, the product fabrication and manufacturing is done by another company in Nanjing, China.
4. For their global connections, they asked KOTRA (Korea Trade-Investment Promotion Agency) to help them. KOTRA has 70 subsidiaries all around the world. Besides the connections that they made via the KOTRA network, they made personal connections in Canada and China as well. Their Canadian connection helps them to sell and market their products in Canada and in the US (they sell some of their products to the US army). Their Chinese connections, on the other hand, help them with the production and manufacturing of their products. Also, their Chinese connection in Nanjing has a subsidiary in the Shanghai. This subsidiary helps them to hire local translators, with no extra charges, to represent the company in Shanghai area. The labor costs in China used to be significantly lower than in Korea, however, nowadays, the labor cost in China is almost the same as in Korea.
5. For commercializing their products in the global markets, they have a unified (all in-house) marketing operations. However, their sales operations are partly (60percent) in-house and partly (40percent) outsourced to global companies. Their customer services are also completely done in-house. This is mainly because, for resolving customers' technical

problems, the high-technology nature of their products requires technical expertise that their global distributors do not usually have. The KOTRA also helps the company with information about potential customers. For instance, the company received a \$200 million order from a Chinese firm last year. After checking with the KOTRA, the company realized that the ordering company did not exist and the order was a swindle order.

From his experience, the CEO emphasized that the research model is applicable to most high-tech SMEs, at least in Korea.

Case 2: Won Technology

Won Technology was established in 1999 with 50 million KRW start-up capitals. The founder, the current president of the company, has a PhD in electronic engineering and prior to establishing this company, he worked in Korea and in the US in electronic and telecommunication R&D areas. The company has two major lines of businesses: wireless communication and medical equipment business. The company started as a wireless communication solution provider in the beginning. However, in recent years, due to maturity of the wireless communication industry from one hand and intense competition in wireless communication from the other hand, the company has shifted its focus to medical equipment business. For this reason, the company has downsized the number of employees and had a decrease in sales in 2006, however, in 2008 the net sales has increased again. Currently, the company employs 65 people and its net sales in 2008 was 10,800 million KRW, which had 23 percent increase over 2007 fiscal year (net sales in 2007 was 8,800 million KRW).

Currently, the company designs, develops, manufactures, and markets three medical equipment: Surgical Diode Laser (a surgical laser device that can be used for various treatments and surgery), Long Pulse Nd Laser (a laser equipment that can be used for various skin treatment, such as hair removal and vascular diseases), and Q-Switched Nd Laser (a laser equipment used for various skin and body treatment, such as wrinkles treatment and tattoo ink removal).

The company has managed to establish its brand domestically and, as a result, it has a strong domestic market. At the same time, the company faces lots of domestic competition, primarily due to the rapid changes in the laser technology that enable the competitors to produce new products all the time. The company is also making progress in the global markets. Currently, the company has customers (via local distributors primarily) in North America, Europe (Finland, Hungary and France), Asia (Singapore and Hong Kong), and the Middle East (Saudi Arabia, Emirates and Jordan).

Answers to research questions:

1. Since the founder of the company has a PhD in Electronic Engineering, he has been familiar with the technology from the beginning. Therefore, technological changes was one the sources of opportunity identification. However, for their new medical equipment, first they evaluated the global market demand and then they tried to find the suitable technology to make globally competitive products. Medical equipment technology is specific, which requires a combination of several different technologies in order to make a final marketable

product. Currently, a combination of technological changes and changes in the market demands are the sources of future product design and development.

2. For starting the company, private savings (from the founder and other family and friends) were the major sources of start-up capital. The company in beginning was run on an *ad hoc* situation, which did not have a solid organizational form. Currently, the company uses different sources of capital, including venture capital firms, the banks, and different government programs. The company borrows debt capital (loan from venture capital firms, not equity or share capital). In the beginning, the company used its social network – for instance, professors in different universities – and hired many university students, with relatively low cost of training and hiring. Still the company does not have a solid organizational structure and lots of changes are taking place in the organizational structure of the company all the time. Meanwhile, the company is divided into R&D, Medical Equipment, Wireless Communication, Manufacturing (fabrication), and Marketing departments.
3. Generating new product idea is a challenge for the company. This is mainly because the medical laser equipment market is a highly specialized market with a handful of suppliers and competitors. Therefore, the sources of new product development opportunities are well known by the competitors. For instance, designing a new laser equipment that has higher wavelength than competitive products in the markets or improving the user-friendliness of their existing products, like adding touch screen LCD. For meeting the immediate demands of practitioners, generating a new product requires a close collaboration between medical doctors and the development company.

Therefore, for generating new product idea, the company usually has a close collaboration with doctors and generates several new product ideas first. Then, the technical and market feasibilities of these new product ideas will be studied in a cross-functional product development teams—in which people from engineering department evaluate whether the product is technically possible to be made and people from marketing department evaluate whether the new product can be marketed and whether it is profitable enough for the company or not. If the product passes all these feasibility tests, it will be designed and developed.

All the product testing and manufacturing are conducted inside the company. Nothing is outsourced. Their major suppliers for their products are local suppliers in Daejeon area. The company usually tries to have minimum ten ready-for-shipping units at any given time.

4. The company for the building global relationship uses different methods. One of their common methods is attending different conferences that attract doctors and medical equipment retailers and distributors. For instance, the current connection that they have with a distributor in Finland was made by the distributor himself during a conference in Europe. The company does not use external sources, like KOTRA, for building global collaborations. This is partly because it is too expensive to use external sources and partly because the company's target markets are specialized niche markets that require special attention and special type of relationship building.

5. For the local market, the company has an established brand and it promotes and markets its products either directly to local doctors or indirectly via the local distributors. For the global markets, however, the company only uses global distributors for all the marketing activities including pricing, promotion, selling and after sales customer services. For new global distributors, the company provides one-week technical training. Besides, their global distributors have enough technical expertise for technical troubleshooting. At the same time, the company receives feed back from global customers (end-users) via their distributors. These feedback on product satisfaction or dissatisfaction are used for improving their existing products or developing new products.

The pricing for the global markets are done by the global distributors. However, new distributors do not have enough idea about pricing the company's products in comparison to similar products. Therefore, in the beginning, the company gives suggestions to the new distributors for pricing their products. At the same time, their global distributors can decide how much they can charge their local customers.

Case 3: ISOtech Co. Ltd.

ISOtech was established in 2003 and currently has 15 full-time employees. The company has three lines of products: Card-Type Blood Sugar Tester (a fast, less than 5 second, blood sugar measurement device), Laser Blood Sugar Tester (a low-pain and fast blood sugar measurement device), and Laser Blood Analyzer (a low-pain and fast blood analyzer device).

Their major competitors are in Korea and Taiwan. Korean competitors are competing on a quality basis, whereas Taiwanese competitors compete on a price basis. Meanwhile, the laser medical equipment market is increasingly becoming saturated and as a result, the competition is shifting towards price competition rather than quality competition. The company is currently focusing on a combination of low-prices and high-quality strategy. The company has market presence in Korea (as the domestic market), India, Pakistan, Azerbaijan, Iran, China, Greece, Turkey, Germany, Indonesia, Egypt, Czech, Bangladesh, and Dubai.

Answers to research questions:

1. For identifying the sources of opportunities, the company uses a combination of technological changes and global market demand. This is partly because the company has exiting products that enable it to evaluate customer feedback and market demands and accordingly design and develop new products. Also, the founder of the company is an engineer and the company is R&D-intensive company. For instance, more than 50percent of their current employees are R&D engineers and staffs. Therefore, the company is involved in new medical laser technology development and technology advancement.
2. The company uses different government programs and banks for financing its current operations. In the beginning, the company borrowed money from venture capital firms but currently they do not use any venture money any more. The company's founder is an engineer and his social network in Daejeon area played an important role in developing and building the company.

For manufacturing and fabricating devices, the company employs part-time employees. Although the company is relatively small, however, it is divided into R&D department, Production department, and Marketing department.

3. The entire new product designs and development and technical and customer testing are conducted inside the company. Currently, the focus of design improvement is on improving their existing products' user-friendliness. Some of their manufacturing activities are outsourced to companies here in Korea. However, most of their production and manufacturing activities are conducted in-house.
4. For establishing global connections, the company attends global medical exhibitions and conferences. For the company, long-term relationships are more important than just making global contacts, merely for selling their products. For this reason, the company sends their marketing people to visit the company's global distributors, sometimes several times a year.
5. The company markets its products via domestic and global distributors only. Therefore, the company does not have direct access to the end-users. Meanwhile, sometimes promotions are offered to end-users, hospitals and independent doctors, via their global distributors.

The company provides all the necessary technical trainings for new distributors and then the distributors will do the customer services. For trainings, in the beginning, the company sends a technical trainer to the distributor's location.

The company provides a five-year product warranty. Therefore, customer service is one of the major sources of competitiveness for the company.

The company receives feedback from the end-users via distributors. These feedbacks are used for improving the quality of their existing products, especially user-friendliness, or for developing new products.

Case 4: RFsemi

RFsemi Technologies Inc. was established in 1999 by three co-founders and 300 million KRW start-up capitals. Since then, the company has had a steady growth, both in terms of number of employees and in terms of annual net sales. Currently, the company has 145 full-time employees. The company's net sales in 2008 were 16,880 million KRW, which had a 22 percent growth over the previous year (its net sales in 2007 were 13,852).

RFsemi designs and manufactures microphone semiconductors. They claim that they are making the smallest microphone semiconductor chips in the world. Therefore, the firm's competitive advantage is in making the smallest microphone chip in the world. The company sells 100 million pieces per month and each semiconductor chip costs about 30 KRW. Their customers are microphone module makers, like BSE. They are 4 microphone module makers in Korea, 6 companies in China, and 3 companies in Japan. The biggest microphone module maker is BSE,

which is also in Korea. The microphone module makers then sell the microphones to cell phone manufacturer such as Samsung, LG Electronic, Nokia, Apple and Sony Ericsson.

In Korea, RFsemi is the only company that produces microphone semiconductors. In Japan, however, there are three major competitors: Sanyo, NEC, Toshiba and Panasonic. In the USA, the major competitors are National Semiconductor, Texas Instrument, and ADI. Traditionally, Japanese companies used to have the monopoly of the microphone semiconductor markets. However, since ten years ago, RFsemi has managed to penetrate the market have 40percent of the world's global microphone semiconductors market shares.

1. Global demands were the first source of opportunity identification. However, since the founders had engineering and technological backgrounds, technological expertise was also important to the opportunity identification. First, they didn't have idea about the market size and market demand. But market demand was the first source of opportunity and then technological development.
2. To start the company, in the beginning, the co-founders used their personal savings. Then, they borrowed money from the banks. After making some product they also tried venture capital firms. The banks did not borrow them money. Therefore, they had to use government warranty for borrowing money from the banks. They started the company with five key people. The company currently employs 135 employees and is divided into: management, marketing and sales, manufacturing, R&D, wafer publication, and quality control and quality assurance. For technology and customer support, they have office in China and a subsidiary in Hong Kong.
3. First, they got their product idea from Japanese products and they followed the same design. Then, they changed and focused on different designs. Now they can customize their designs for each customer based on the customer's requirements. Testing is totally conducted in-house. They have three types of testing: 1) technical testing, conducted inside the company; 2) customer testing, conducted with the microphone module makers, who are in Korea, China and Japan; and 3) end-user testing, conducted with cell phone and electronic device manufacturers, like Samsung or LG Electronics. They manufacture everything in-house and nothing is outsourced.
4. They do not use organizations like KOTRA for building global connections. In the beginning, it was very hard to establish global connections, however. Therefore, first, they concentrated on the domestic market. Then, they used Samsung's global customer network for establishing global connections. This way they managed to find most of their current customers.

The owners and the founders of the company worked for 25 years in R&D and used to attend lots of conferences. However, currently, they do not attend international conferences any more. Meanwhile, they use different promotions and domestic conferences for promoting their products. They have constant communication with their customer almost once a month for maintaining their customer relationships..

5. They do not use any kind of promotion for advertising their products. They claim they do not need to advertise their products any more because their global customers contact them for ordering their products. But if they make new products, they need to offer promotions for marketing their products. They have standard pricing system with little differences among different markets. They use sometimes direct or agents for providing customer services. The feedbacks from customers first go to the microphone module makers, then come to them. They always try to make and keep customers satisfied. Feedbacks are useful for improving their existing products. It usually takes two years to develop a new product. Improvement of their existing products, however, takes only three months.

Discussion

The finding of the cases is summarized in Table 1. The research findings show that in all companies, prior technological capabilities and expertise of the founders of the companies played a crucial role in identifying a suitable high-tech product opportunities. Meanwhile, in three out of four companies, beside the technological capabilities, capabilities to evaluate the global market needs and demands also played an important role in identifying opportunities. Thus, we may safely conclude that to have strong capabilities for identifying global entrepreneurial capabilities, the firm needs both technological and market evaluation capabilities. Meanwhile, technological capabilities are prerequisite for the market evaluation capabilities.

The research showed that all the companies had very strong social network building capabilities for starting and running their businesses, especially for raising capitals. At the same, the major focus of the majority of the companies was not organizational building *per se*, which was hypnotized prior to the empirical research. The major focus of three companies out of four was merely commercializing their new products in the global markets. Particularly, they emphasized that building an organization is not necessarily a difficult task. However, successfully commercializing the company's products is the daunting task.

All the companies had strong in-house product design and development capabilities. In three out of four companies, all the phases of a product design and development including idea generation, prototype development, product development, technical and customer testing, and manufacturing were conducted entirely in-house. However, one company, Teltron Inc., outsourced the the manufacturing of its final products to a Chinese company, mainly because of lower labor costs.

All the companies had strong cross-cultural relationship building capabilities. Two companies (medical equipment firms) their global relationships were mainly established in global professional conferences that doctors and medical equipment distributors attended. The other two companies used the global networks of other companies for identifying their global connections and global customers (one company, Teltron Inc., used KOTRA's and the other company, RFsemi, used Samsung's global network).

For commercializing their products in global markets, three out of four companies relied heavily on global distributor. However, one company, RFsemi, used direct marketing for commercializing its products in the global markets. Thus, we may conclude that outsourcing capabilities plays a crucial role in commercializing high-tech products in the global markets.

As shown in Table 1, two companies, ISOTech Co. and RFsemi, were highly competitive in their global markets. These two companies were R&D-intensive firms. For instance, more than 50 percent of ISOTech Co.'s full-time staffs are R&D engineers. Meanwhile, on average, all the companies were quite competitive in their global markets. Also, as shown in Table 1, except one company that during the interview did not have the necessary data, three companies had relatively high annual revenue increase. Therefore, we may conclude that entrepreneurial capabilities of high-tech firms are positively correlated with the firms' competitive advantage and their Schumpeterian rents generation capabilities. Meanwhile, their competitive advantages might not be sustainable and might be short-lived. In order to have long-term sustainable competitive advantage, the firms need stronger dynamic capabilities that enable the firms to build and re-build their productive capabilities (like their product development capabilities) continuously.

	Teltron Inc.	Won Technology	ISOtech Co.	RFsemi
Capabilities to Identify an Entrepreneurial Opportunity	Technological Capabilities	Technological and Market Evaluation Capabilities	Technological and Market Evaluation Capabilities	Technological and Market Evaluation Capabilities
Capabilities to Build an Entrepreneurial Organization	Social Network Building Capabilities	Social Network Building Capabilities	Social Network Building Capabilities	Social Network Building Capabilities
Capabilities to Innovate and Make a New Product	Design and Development Capabilities + Outsourcing Capabilities	Design and Development + Customer Collaboration Capabilities	Design and Development Capabilities + Customer Collaboration Capabilities	Design and Development Capabilities
Capabilities to Build Global Relationships	Cross-Cultural Relationship Building Capabilities + Outsourcing Capabilities	Cross-Cultural Relationship Building Capabilities	Cross-Cultural Relationship Building Capabilities	Cross-Cultural Relationship Building Capabilities
Capabilities to Commercialize in Global Markets	Global Marketing Capabilities + Outsourcing Capabilities	Outsourcing Capabilities	Outsourcing Capabilities	Global Marketing Capabilities
Global Competitiveness	Moderate	Moderate	High	High
Schumpeterian rents	15.5 Percent Increase	23 Percent Increase	N/A	22 Percent Increase

Table 1: Case Study Findings

Author's Bio

Majid Aramand is currently an assistant professor of Management and Strategy in Hannam University. He has received his Masters and his PhD degrees in Strategic Management from Tampere University of Technology in Finland. Dr. Aramand's research focuses on entrepreneurial firm's global product design and development capabilities, with particular attention to the contribution of users and customers to the development and evolution of dynamic capabilities. Dr. Aramand had over eight years of managerial, entrepreneurial, teaching and research experience prior to joining Hannam University in 2008. He has also conducted research on virtual organizations at the Digital Media Institute, Tampere University of Technology, and his research has been published in numerous conference proceedings and academic journal, including Technovation journal.

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Bibliography

- Alvarez, Sharon A. and Busenitz, Lowell W. (2001) "The entrepreneurship of resource-based theory," *Journal of Management*, 27(6), 755-775.
- Aramand, Majid (2008) "Software Products and Services are High Tech? New Product Development Strategy for Software Products and Services," *Technovation*, 28(3), 154-160.
- Arthurs, J.A., and Busenitz, L.W. (2006) "Dynamic Capabilities and New Venture Performance: The Moderating Effects of Venture Capitalists," *Journal of Business Venturing*, 21, 195-215.
- Barney, Jay and Clark, Delwyn (2007) *Resource-Based Theory: Creating and Sustaining Competitive Advantage*, Oxford: Oxford University Press.
- Baron, Robert, and Shane, Scott (2009) *Entrepreneurship: A Process Perspective*. Mason, OH: South-Western.
- Blyler, Maureen and Coff, Russell (2003) "Dynamic Capabilities, Social Capital, & Rent Appropriation: Ties that Split Pies," *Strategic Management Journal*, 24(7), 677-686.
- Darroch, J., Miles, M. P. and Paul, C. W. (2005) "Corporate Venturing and the Rent Cycle," *Technovation* 25(12), 1437-42.
- Davidsson, P. (2004). *Researching Entrepreneurship*. Boston, MA: Springer.

- Drucker, Peter F. (1985) *Innovation and Entrepreneurship*. New York, NY: HarperCollins Publishers.
- Eisenhardt, Kathleen M., Martin, Jeffrey A. (2000) "Dynamic capabilities: what are they?," *Strategic Management Journal*, 21(10-11), 1105-1121.
- Helfat, Constance E., Finkelstein, Sydney, Mitchell, Will, Peteraf, Margaret, Singh, Harbir, Teece, David, and Winter, Sidney G. (2007) *Dynamic Capabilities: Understanding Strategic Change in Organizations*, Malden, MA: Wiley-Blackwell.
- Ireland, R. Duane, Hoskisson, Robert E., and Hitt, Michael A. (2009) *The Management of Strategy*. Mason, OH: South-Western.
- Shane, Scott and Venkataraman, S. (2000), "The promise of entrepreneurship as a field of research", *Academy of Management Review*, (25), 217-226.
- Teece, David J., Pisano, Gary, Shuen, Amy (1997) "Dynamic capabilities and strategic management," *Strategic Management Journal*, 18 (7), 509-533.
- Wheeler, Bradley C. (2002) "NEBIC: A Dynamic Capabilities Theory for Assessing Net-Enablement," *INFORMATION SYSTEMS RESEARCH*, 13(2), 125-146.
- Zahra, S., and George, G. (2002) "Absorptive capacity: A review, reconceptualization and extension," *Academy of Management Review*, 27, 85-203.
- Zahra, Shaker A., Sapienza, Harry J., and Davidsson, Per (2006) "Entrepreneurship and Dynamic Capabilities: A Review, Model and Research Agenda," *Journal of Management Studies*, 43(4), 917-955.

Appendix A-1: Questionnaire

1. How did you identify opportunities in global markets?

By identifying technological changes?

By identifying political changes?

By identifying market regulation changes?

By identifying demographical (like age) changes?

By identifying global demand?

By identifying other sources? Please indicate.

2. How did you build the company?

How did you acquire / find money for starting the company?

How do you acquire / find money for running the company?

How did you hire your staffs in the beginning?

How do you do your staffing now?

How do you manage and motivate your staffs?

How do you maintain and keep your staffs?

3. How did you design and make your new products?

How did you generate the new product idea?

How did you make the first prototype?

How do you do the technical testing of your products?

How do you do the customer testing (usability testing)?

How do you make and manufacture your new product?

4. How did you build cross-cultural relationship / collaboration?

How did you identify cross-cultural connections?

How did you build cross-cultural connections?

How do you use / utilize your cross-cultural connections?

How do you maintain and keep your cross-cultural connections?

5. How do you commercialize your product or service in the global markets?

How do you promote and advertise your products in global markets?

How do you price your products for global markets?

How do you use global distribution channels to access customers?

How do you sell your products in the global markets?

How do you provide global customer services?

How do you create global customer satisfaction and customer feedback?

Appendix A-2: Questionnaire in Korean Language

1. 당신은 어떻게 국제시장 기회를 확인하게 되었습니까?

기술변화를 확인하면서 알게 됐다.
정치적 변화를 확인하면서 알게 됐다.
시장규제 변화를 확인하면서 알게 됐다.
국제수요를 확인하면서 알게 됐다.
다른 요소들로 인해서 알게 됐다 (기타) 자세하게

2. 당신은 어떻게 회사를 설립하게 되었습니까?

당신은 어떻게 회사자금을 회사의 착수를 위해 얻거나 찾을 수 있었습니까?
당신은 어떻게 회사자금을 회사의 운영을 위해 얻거나 찾고 계십니까?
당신은 어떻게 회사초기에 직원들을 고용했습니까?
당신의 직원들은 지금 어떤 일을 하고 있습니까?
당신은 어떻게 직원들을 동기 부여시키고 다루고 있습니까?
당신은 어떻게 직원들을 유지시키고 보유하고 계십니까?

3. 당신은 어떻게 새 제품을 디자인하고 만들게 되었습니까?

어떻게 당신은 새 제품의 아이디어를 고안하게 되었습니까?
어떻게 당신은 제품의 첫 번째 원형을 만들게 되었습니까?
당신은 어떻게 당신의 제품의 기술적 시험을 하고 있습니까?
당신은 어떻게 당신의 제품의 고객시험을 하고 있습니까? (유용성 테스트)
당신은 어떻게 새 제품을 만들고 제조하고 계십니까?

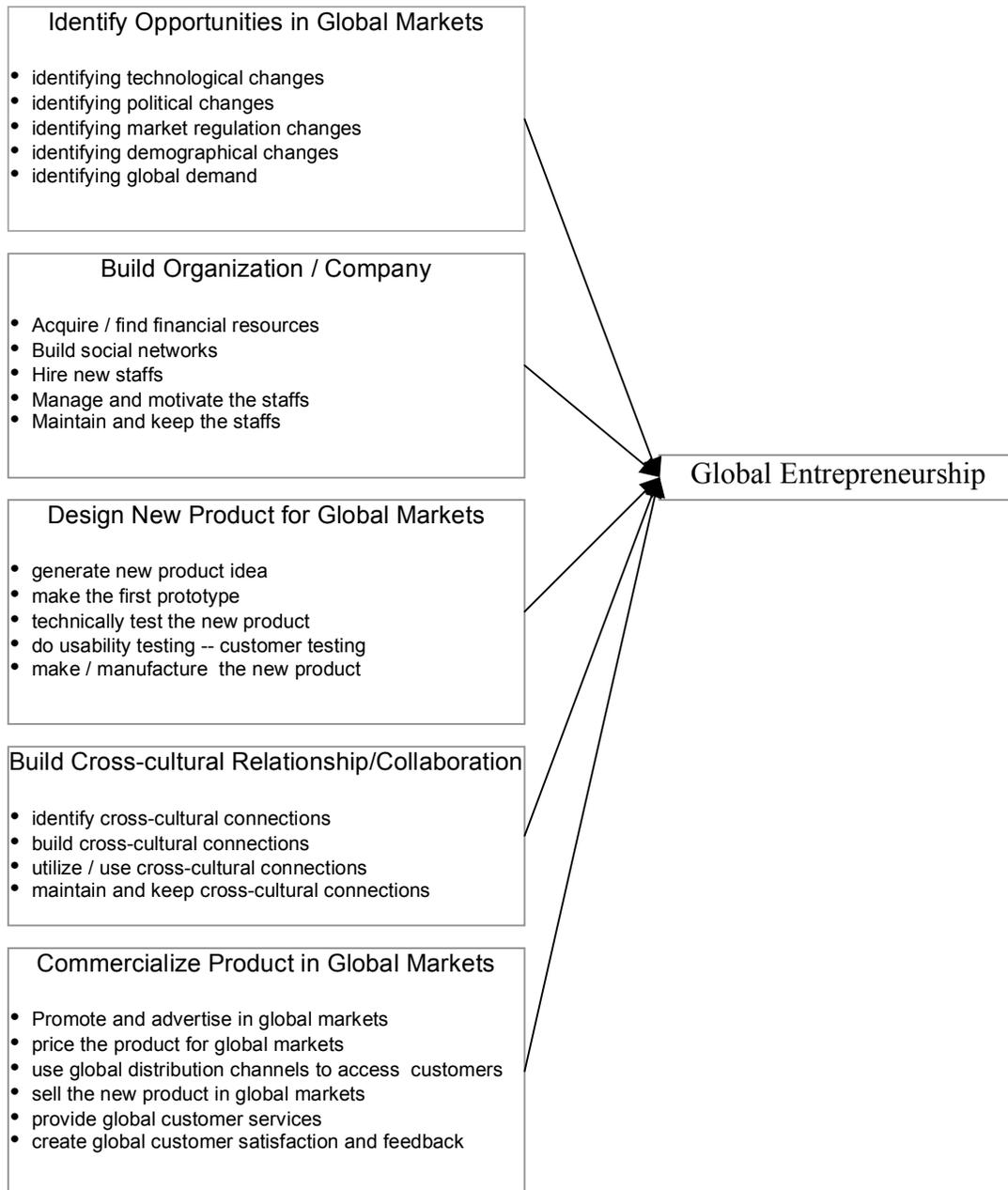
4. 당신은 어떻게 다국적문화간의 관계를 형성하게 되었습니까? / 공동연구 있습니까?

당신께서는 어떻게 다국적문화간의 관계연결을 식별하셨습니까?
당신은 어떻게 다국적 관계를 사용하고 있습니까?
당신은 어떻게 다국적 관계를 유지하고 고수하고 있습니까?

5. 당신은 어떻게 당신의 상품이나 서비스를 국제시장에서 상품화시키고 있습니까?

당신은 어떻게 당신의 상품을 국제시장에서 증진시키고 광고하고 있습니까?
당신은 어떻게 당신의 상품을 국제시장을 위해 값을 매기고 있습니까?
당신은 고객에게 접근하기 위해 어떻게 국제배급경로를 사용하고 있습니까?
당신은 어떻게 당신의 상품을 국제시장에서 팔고 있습니까?
당신은 어떻게 국제 고객 서비스를 제공하고 있습니까?
당신은 어떻게 국제고객 만족도와 고객의 반응을 만들고 있습니까?

Appendix B: Research Model



Technology Strategy, External Environment, and the Performance of Technology-based SMEs in China

Thomas Wing Yan Man, K.F. Chan, and Theresa Lau

As an effort to investigate the relationship among technology strategy (TS), external environment, and firm performance in the context of China, an empirical study was conducted, using a sample of 118 technology-based small and medium-sized enterprises. The findings showed that there was a strong direct impact for three of the four TS variables on firm performance. However, the moderating effects of the environmental variables between the TS variables and firm performance were rather weak. These findings could be attributed the unique external environment of China which is characterised by the rapidly emerging market with less codified business practices.

Introduction

High-tech industries play an important role in the economic development of a country (Medcof, 2007; Xu and McNaughton, 2006; Feser, Renski and Goldstein, 2008). Within these industries, small and medium-sized enterprises (SMEs) often play a crucial role in providing innovation, technological advancements, high growth and job creation (Bruton and Rubanik, 2002, Deeds, Decarolis, and Coomb, 1998; Cooper and Park, 2008). Therefore, it is important to understand the factors leading to the performance of these technology-based SMEs.

Among various factors, strategy is critical for determining a firm's the long-term competitiveness by aligning an organization's goals, its resources and capabilities with the environmental factors together (Powell, 1992; Fuchs et al., 2000; Beer et al., 2005). More specifically, the adoption of technology strategy (TS) is considered as the most important for the SMEs in the high-tech industries because it is directly related to the development of the

technological capabilities through its interaction with the external environment (Zahra and Bonger, 1999).

Being one of the biggest transitional economies in the worlds, China's high-tech industries contribute as an increasingly important role in its economy. Between 2002 and 2006, the share of high-tech industries in total GDP increased from 3.13 percent to 4.77 percent, and the share of high-tech industries in manufacturing GDP also increased from 9.9 percent to 13.9 percent during the same period (China Science and Technology Statistics, <http://www.sts.org.cn>). To support the SMEs and new venture development in the high-tech industries, the Torch Programme has been launched since 1998 through a range of support schemes, including the provision of venture capital, technology incubators, science parks, technology transfers, and human resource support (<http://chinatorch.gov.cn>). Between 2002 and 2006, the accumulated technology-based enterprises associated with the technology incubator programmes have increased from 6207 to 19896. The number of enterprises in various science parks has also increased from 2411 to 6720 (China Science and Technology Statistics, <http://www.sts.org.cn>).

Nevertheless, the technology-based SMEs in China has also to cope an external environment which are often associated with structural uncertainty (Sun and Wong, 1997), being dynamic, complex yet hostile (Tan, 1997), and a lack of codified, well-developed rules and commercial convention (Alstrom and Burton, 2001; Peng, 2000). For entrepreneurs in China, these environmental characteristics are considered as challenging and even undesirable. Extra effort is often required to deal with various problems through relationship building and other means (Man, Lau and Chan, 2008).

Therefore, the main purpose of this study is to investigate the impacts of TS on the

performance of technology-based SMEs in the context of China. More specifically, the two research questions are: first, to what extent does TS affect the performance of these SMEs in China? And second, how do the external environmental factors affect this relationship?

In the following sections, hypotheses were first developed through a literature review on TS and its relationships with firm performance and two environmental factors, namely, institutional support and dysfunctional competition. We will then report an empirical study on investigating these hypotheses through the use of a questionnaire survey of the technology-based SMEs in China. The findings will be discussed with recommendations on the areas for further studies.

Conceptual Background and Hypothesis Development

Technology Strategy and Performance

TS is related to the level of research and development investment and targeted level of technological advancement when compared with competitors (Galbraith, Rodriguez and DeNoble, 2008). Over the past few decades, a rapidly growing area of strategic management research is to examine the strategy employed by those technology-based firms, especially in the SMEs (Bantel, 1997; Bruton and Rubarik, 2002). This is because TS is one of the most important aspects in forming a firm's strategic posture, and subsequently, leading to firm performance (McGrath, 1994; Zahra and Bogner, 1999; Zahra, 1996), as a firm can use technology to create a competitive advantage by introducing novel products or technology processes that attract customers, creating barriers that deter the entry of rivals, and even changing the rules of competition in an industry (Golder and Tellis, 1993; Zahra, Nash and Bickford, 1995). As a result, developing specific strategies for guiding the use of technological resources and skills effectively is critical (Adler, 1989). According to Ngamkroekjoti, Speece, and Dimmitt (2005), there are four key TS issues, including what

technologies to develop, the cost and suitability of existing technologies for meeting organizational goals, whether to seek technological leadership in those technologies, and whether to guard or share new technology development.

An approach to deal with these TS issues is to view a firm's TS in different dimensions. For example, Zahra and Bogner (1999) conducted a study to examine the relationships between TS and new venture performance with a focus on five TS dimensions, namely, radicality of new product or process technologies, intensity of product upgrades, R&D spending levels, uses of external sources of technology, and copyrights and other means of intellectual capital protection. According to their findings, direct and positive relationships between these TS dimensions and one or two measures of new venture performance have been shown, except for the dimension of R&D spending levels. A more recent study by Sharma (2008) has also shown that TS is correlated with organisational performance in firms, particularly for firms in their growth stage and involved in the production of consumer and industrial goods. This result may also characterise that of the technology-based SMEs.

Evidence for this relationship has also been noted in the context of China. For example, Luo (1999) found that there is a positive relationship between the use of innovativeness strategy and the performance of SMEs in China. In the high-tech context, Li and Atuahene-Gima (2001) found product innovation strategy has its direct impact on new technology venture performance. Therefore, the following hypothesis is proposed:

H1: The adoption of technology strategy is positively related to the performance of technology-based SMEs in China.

Impacts of External Environment

It has been suggested that the relationship between strategy and firm performance is moderated by how managers perceive up the external environment (Dess and Beard, 1984; Li and Atuahene-Gima, 2001; Zahra and Bogner 1999). In particular, the relationship between TS and the performance of the technology-based ventures is moderated by the external environment, either positively and negatively, through factors such as market dynamism, market heterogeneity, price hostility etc.

On the positive wide, support from the government is often found in places in which technological advancement is emphasized, as this support helps the technology-based SMEs to reduce the adverse effects of the inadequate institutional infrastructure in the transitional process of technological advancement (Li and Atuahene-Gima, 2001) and decrease the risks and resource constraints for them to pursue their TS (Guo, 1997). Types of institutional support include the provision of infrastructure like science parks, as well as financial, informational and advisory services (Lai and Shyu, 2003; Storey and Tether, 1998). According to Li and Atuahene-Gima (2001), support from government institutions have played a significant role in enhancing of the effectiveness of new technology ventures' product innovation strategy.

Based on the above, we posit that TS's effect on the performance of technology-based SMEs will be positively enhanced if these SMEs perceive that there is a sufficient level of institutional support provided to them. Therefore, the following hypothesis is proposed:

H2: The relationship between the adoption of technology strategy and the performance of technology-based SMEs in China is positively moderated by institutional support.

On the other hand, on the negative side, a hostile environment is often considered as being

unfavorable to a firm's operation. A hostility environment may be attributed to the existence of too many competitions, unfavorable supply conditions; radical industry changes, uncertainties of competition, market and products, and strict regulation (Zahra and Bogner, 1999; Zahra and Garvis, 2000; Dess and Beard, 1984; Werner, Brouthers and Brouthers, 1996). In particular, intense or even dysfunctional competition is a particularly important concern in the business context of China. Dysfunctional competition means that the competitive behavior of firms in a market is opportunistic, unfair, or even unlawful (Li and Atuahene-Gima, 2001). The problem in the current Chinese business context is intensified by the intrusive governmental officials and the lack of codified laws, well-developed rules and convention (Man et al., 2008; Alstrom and Burton, 2001; Peng, 2000). As a result, firms may be tempted to engage opportunistic and unlawful behaviors, which will in turn lead to dysfunctional competition against each other.

Under this context, even a firm wishes to pursue its TS, its effectiveness would be undermined. This effect may be of particular prevalent to SMEs. Therefore the third hypothesis is as follows:

H3: The relationship between the adoption of technology strategy and the performance of technology-based SMEs in China is negatively moderated by dysfunctional competition.

Research Methodology

Questionnaire Design With regard to questionnaire design, the basic company information such as firm size, firm age, and the number of market segments were included as controlled variables. Other factual information such as nature of industry, the number of patent application and the number of new products developed were also collected so as to develop general understanding of the technology-based SMEs in China.

The independent variables were adopted with reference to validated instruments used in past studies. Firstly, dimensions of TS are drawn from the instruments designed and used by Zahra & Bogner (1999). The original scale contained 20 items under the dimensions of 1) the firm's internal R&D investment, 2) external sources of technology development, 3) intensity of product upgrades, 4) radicality of new products, and 5) copyright, patents and protection of intellectual capital. The Cronbach alpha coefficient ranged from 0.66 to 0.81 for these five dimensions.

Institutional support and dysfunctional competition are considered to moderate the effect of organizational capability on high tech SMEs' performance. Therefore, the questionnaire design also capture the situation on how the government and other agencies provide support to the technology-based SMEs, as well as the extent to which the competitive behaviour of firms in a market is perceived as opportunistic, unfair, even unlawful. They are adapted from the research instrument designed and used by Li & Atuahene-Gima (2001). Both scales contain five items with Cronbach alpha coefficient equal to 0.71.

Lastly, in measuring the dependent variable in our study, i.e. the SMEs performance, we used a diverse approach by asking the respondents to indicate their companies' financial performance in comparison with the competitors in the same industry (McDougall et al., 1994). The indicators include 9 items such as return on investment, sales growth, market share and perceived company reputation, etc. The Cronbach alpha coefficient of this scale is 0.88.

Sample and Data Collection In order to test the hypotheses and to find out how and to what extent TS affect the performance of technology-based SMEs, we conducted a mail survey on

the period from 2005 to 2006. The target companies were selected from referrals by high tech zone of mainland China in four regions: Harbin, Nanjiu, Tsingtao and Suzhou. Based on our connection, we visited the science parks in these three regions and obtained a set of data from the managers of these science parks. The included companies in the high-tech industries based on the definition of our study, e.g. biotechnology, information technology, telecommunication, chemical, electronic, etc. In total, we sent out 208 questionnaires in which 118 responses were received, representing 57% response rate. Referrals and connection are important to collect data in China and to get a good response rate.

Analysis We first made use of descriptive statistics to obtain a general understanding of the data. To test the hypotheses, hierarchical OLS regression models were developed. By using exploratory factor analysis, the standardised principal component factors of the TS dimensions were used instead of the original composite variables so as to avoid the potential problems of multicollinearity. Similarly, the standardized scores of the dependent variable of firm performance and moderating variables of institutional support and dysfunctional competition were used so that the variables are more comparable. Models 1 and 2 were used to test Hypotheses 1, 2 and 3 through investigating the direct impacts of TS dimensions and the moderated effects of institutional support and dysfunctional competition. As explained later, additional Models 3 and 4 were used to focus on impacts of the moderated effects.

Findings

The sample characteristics are shown in Table 1 below:

Insert Table 1 about here

With the average number of 82.26 employees per firm found for 7.03 years, the sample is characterized by SMEs which are rather young. However, they tend to operate across different market segments, which suggests that they are multi-product/service business. Moreover, the numbers of patent application and new product development imply that they are rather active in R&D. Therefore, the sample should match well with our expected type of technology-based SMEs in China.

The exploratory factor analysis has resulted in a four-dimensional model of TS, namely, 1) internal R&D investment, 2) reliance of external sources of technology, 3) intensity and radicality of product upgrades and 4) use of copyrights, patents and protection of intellectual capital. This difference from the original five-dimension may be attributed to the closer connection between intensity and radicality of product upgrades. These resulting dimensions were used in the consequent correlation and regression analyses.

Insert Table 2 about here

From the above correlation analysis, three out of the four TS dimensions have shown a strong correlation with the firm performance. This result has provided a preliminary support for H1 which suggests a direct relationship between TS and firm performance. On the other hand, the positive correlation between institutional support and firm performance implies that there should also be a direct effect of institutional support on firm performance as well.

To provide further evidence for the hypotheses, Regression Models 1 and 2 were developed

and tested for the moderating variables of institutional support and dysfunctional competition respectively. Using a hierarchical regression approach, the control variables were first introduced in each model, followed by the direct effect of the independent and moderating variables, and finally the moderating effects. The findings were shown in Table 3:

Insert Table 3 about here

The results showed that there was an overall significant regression equations for both Models 1 and 2, with R^2 of 0.520 (adjusted $R^2 = 0.351$) on the final Model 1 and R^2 of 0.451 (adjusted $R^2 = 0.257$) on the final Model 2 respectively. Significant and positive effects of three out of the four TS dimensions were also found on both of them. This implied that the direct impacts of the TS on firm performance are rather strong. On the other hand, steps 3 and 4 were related to the direct impacts of the two moderating variables as well as their moderating effect on the dependent variables. However, except for the direct impact of institutional support, another moderating variable (dysfunctional competition) and all of the moderating effects on various TS dimensions were not significant. Therefore, the moderating effects of both institutional support and dysfunctional competition were unobserved. Also, the control variables did not show significant effects on firm performance in the regression analysis.

In order to examine more in-depth on whether the moderating effects were present, additional Model 3 and 4 were used but in this case, the main effect of the independent variables was removed. The results are shown in Table 4 below:

Insert Table 4 about here

In this circumstances, an overall significant equation for Model 3 was observed, with R^2 of 0.294 (adjusted $R^2 = 0.146$) on the final Model 3. Significant and positive coefficients were found on the direct effect of institutional support and on one of the four moderating effects on the respective TS dimensions only, which was the use of copyrights, patents and protection of intellectual capital. However, the main effect of dysfunctional competition and its moderating effects were still found to be insignificant on Model 4.

According to the above findings, a strong and direct impact for three out of the four TS variables (internal R&D investment, intensity and radicality of product upgrades, and use of copyrights, patents and protection of intellectual capital) on firm performance was shown. Therefore, H1 was largely supported. However, unlike the findings from the prior studies in other contexts, the performance impact of the moderating effects of the environmental variables on the TS variables was rather weak, with only the moderating effect of institutional support on the use of copyrights, patents and protection of intellectual capital being significant in affecting firm performance in the absence of the direct impact of the TS variables. Therefore, H2 was partially supported while H3 was not supported.

Discussion and Conclusion

The above empirical study was conducted to investigate the direct impact of TS on the performance of technology-based SMEs in the context of China and the moderating effects of two environmental factors on this relationship. The findings suggest that the adoption of TS has a prevalent role in affecting the firm performance of the high-tech SMEs in China, despite the variations among their perception of the external environment factors they are facing.

These findings are different from many of the prior studies which highlighted the moderating or interactive effect of the environmental factors in addition to the direct effect of TS (for example, Zahra and Bonger, 1999; Sharma, 2008; Ngamkroekjoti et al., 2005).

These findings may be attributed to the unique external environment of China which is characterised by the rapidly emerging market with less codified business practices. The main reasons are, firstly, in the Chinese context in which the technology-based SMEs are operating in a rapidly emerging market, growth and development are the major concerns and so these technology-based SMEs would make every effort to formulate TS for pursuing growth and development. Secondly, being adapted to the less codified business environment in China for years, negative external factors like dysfunctional competition could no longer have an explicit impact in negatively affecting the use of TS. On the other hand, as the sample was drawn from the science parks in China, institutional support did have its impacts on the performance of these technology-based SMEs but, as explained above, its moderating effect is not very strong in helping these SMEs to develop TS. As the use of copyright-related TS implies that these SMEs have confidence in having a more codified business environment, this is only under these circumstances in which institutional support has demonstrated its moderating effect with a significant impact on firm performance.

Nevertheless, although we highlighted the prevalent importance of specific types of TS in this study, the findings do not imply that these technology-based SMEs do not need to pay attention to the external environment in China. In fact, it is extremely important to cope with various external challenges in the business context of China, even before the firms are founded and operated. In further studies, it may also be of interest to identify other environmental factors and to investigate their effects on these technology-based SMEs. Also, other types of TS may be explored.

References

- Adler, P. (1989), "Technology Strategy: Guide to the Literature," in *Research on Technology Innovation, Management and Policy*. Ed. R.S. Rosenbloom and R.A. Burgelman, Greenwich, CT: JAL Press, 1-25.
- Alstrom, D. and Bruton, G.D. (2001), "Learning from Successful Local Private Firms in China: Establishing Legitimacy," *The Academy of Management Executive*, 15, 72- 81.
- Bantel K.A. (1997), "Performance in Adolescent, Technology-based Firms: Product Strategy, Implementation, and Synergy," *Journal of High Technology Management Research*, 8(2): 243-262.
- Bear, M., Voelpel, S.C., Leibold, M. and Tekie, E.B. (2005), "Strategic Management as Organizational Learning Developing Fit and Alignment through a Disciplined Process," *Long Range Planning*, 38(5), 445-465.
- Bruton G.D. and Rubanik Y. (2002), "Resources of the Firm, Russian High-technology Startups, and Firm growth," *Journal of Business Venturing*, 17: 553-576.
- Cooper, S.Y. and Park, J.S. (2008), "The Impact of 'Incubator' Organization on Opportunity Recognition and Technology Innovation in New, Entrepreneurial High-technology Ventures," *International Small Business Journal*, 26(1), 27-51.
- Deeds D.L., Decarolis D. and Coombs J.E. (1998), "Firm-specific Resources and Wealth Creation in High Technology Ventures: Evidence from Newly Public Biotechnology Firms," *Entrepreneurship Theory and Practice*, 22(3), 55-73.
- Dess G.G. and Beard D.W. (1984), "Dimensions of Organizational Task Environments," *Administrative Science Quarterly*, 29(1), 52-73.
- Feser, E., Renski, H. and Goldstein, H. (2008), "Clusters and Economic Development Outcomes: An Analysis of the Link Between Clustering and Industry Growth," *Economic Development Quarterly*, 22(4), 324.
- Fuchs, P.H., Mifflin, K.E, Miller, D. and Whitney, J.O. (2000), "Strategic Integration: Competing in the Age of Capabilities," *California Management Review*, 42(3), 118-147.
- Galbraith, C.S., Bodriguez, C.L, and DeNoble, A.F. (2008), "SME Competitive Strategy and Location Behavior: an Exploratory Study of High-Technology Management," *Journal of Small Business Management*, 46(2), 183-202.
- Golder P. and Tellis G. (1993), "Pioneer Advantage: Marketing Logic or Marketing Legend?" *Journal of Marketing Research*, 30(2), 160-174.
- Gou, K. (1997), "The Transformation of China's Economic Growth Pattern – Condition and Methods," *Social Sciences in China*, 18(3), 12-20.
- Li H., and Atuahene-Gima K. (2001), "Product Innovation Strategy and the Performance of

- New Technology Ventures in China,” *Academy of Management Journal*, 44(6), 1123-1134.
- Luo, Y. (1999), “Environment-Strategy-Performance Relations in Small Businesses in China: A Case of Township and Village Enterprises in Southern China”, *Journal of Small Business Management*, 27(1), 37-52.
- Man, T.W.Y., Lau, T. and Chan, K.F. (2008). “Home-grown and Abroad-bred Entrepreneurs in China: a Study of the Influences of External Context on Entrepreneurial Competencies,” *Journal of Enterprising Culture*, 16(2), 113-132.
- McDougall P.P., Covin J.G., Robinson R.B. and Herron L. (1994), “The Effects of Industry Growth and Strategic Breadth on New Venture Performance and Strategy Content,” *Strategic Management Journal*, 15(7), 565-580.
- McGrath M.E. (1994). *Product Strategy for High Technology Companies: How to Growth, Competitive Advantage and Increased Profits*, Burr Ridge, IL: Irwin.
- Medcof, J.W. (2007), “Subsidiary Technology Upgrading and International Technology Transfer, with Reference to China,” *Asia Pacific Business Review*, 13(3), 451.
- Ngamkroekjoti, G., Speece, M. and Dimmitt, N.J. (2005), “Environmental Scanning in Thai Food SMEs: the Impact of Technology Strategy and Technology Turbulence,” *British Food Journal*, 107(4/5), 285-305.
- Peng, M.W. (2000), *Business Strategies in Transition Economies*, Thousand Oaks, CA: Sage publications.
- Powell. T.C. (1992), “Organizational Alignment as Competitive Advantage,” *Strategic Management Journal*, 13(2), 119-134.
- Sharma, S. (2008), “Technology Strategy, Contextual Factors and Business Performance: an Investigation of Their Relationship”, *South Asian Journal of Management*, 15(3), 19-39.
- Shyu, J.Z, and Lai, H.C. (2005), “A Comparison of Innovation Capacity at Science Parks across the Taiwan Strait: the Case of Zhangjiang High-Tech Park and Hsinchu Science-based Industrial Park,” *Technovation*, 25(7), 805-813.
- Storey, D.J. and Tether, B.S. (1998), “Public Policy Measures to Support New Technology-based Firms in the European Union,” *Research Policy*, 26(9), 1037-1057.
- Sun, W.B., and Wong, S.L, (1997), “Chinese entrepreneurship in the era of reform: a review of the literature,” *Workshop on Entrepreneurship and Economic Development in Contemporary China*, University of Hong Kong, 2 May.
- Tan, J. (1997), “Regulatory Environment and Strategic Orientations in a Transitional Economy: a Study of Chinese Private Enterprise,” *Entrepreneurship Theory and Practice*, 21(1), 31-46.
- Werner, S., Brouthers, L.E. and Brouthers, K.D. (1996), “International Risk and Perceived Environmental Uncertainty: the Dimensionality and Internal Consistency of Miller’s

- Measure,” *Journal of International Business Studies*, 27(3), 571-587.
- Xu, S.X. and McNaughton, R.B. (2006), “High-technology cluster evolution: a network analysis of Canada's Technology Triangle,” *International Journal of Entrepreneurship and Innovation Management*, 6(6), 591-608.
- Zahra S.A. (1996), “Technology Strategy and New Venture Performance: A Study of Corporate-sponsored and Independent Biotechnology Ventures,” *Journal of Business Venturing*, 11(1), 289-321.
- Zahra S.A. and Bogner W.C. (1999), “Technology Strategy and Software New Ventures’ Performance: Exploring the Moderating Effect of the Competitive Environment,” *Journal of Business Venturing*, 15(2): 135-173.
- Zahra S.A., and Garvis D.M. (2000), “International Corporate Entrepreneurship and Firm Performance: the Moderating Effect of International Environmental Hostility,” *Journal of Business Venturing*, 15(5/6), 469-492.
- Zahra S.A., Nash S. and Bickford D. (1995), “Transforming Technological Pioneering into Competitive Advantage,” *Academy of Management Executive*, 9(1), 17-31.

Tables

Table 1 Key Firm Characteristics

	Number of Employees	Firm Age	Number of Market Segment	Number of Patent Applications Last Year	Number of New Product Developed Last Year
Mean	82.26	7.03	7.44	1.84	3.48
Std. Dev.	105.024	10.118	14.088	3.092	4.323

Table 2 Correlation Analysis of Variables

	1	2	3	4	5	6	7	8	9	10
1. Firm's Overall Performance	1									
2. Firm Size	.274**	1								
3. Firm Age	.045	.227*	1							
4. Number of Market Segments	.046	-.030	-.041	1						
5. Internal R&D Investment	.318**	.092	.083	.067	1					
6. Product Upgrades Intensity & Radicality	.471**	.295**	-.190	-.047	.085	1				
7. Copyrights	.284**	.078	-.018	.122	.062	-.062	1			
8. External Sources	.083	-.168	-.184	.040	.001	.028	-.043	1		
9. Institutional Support	.307**	.129	-.093	.184	.119	.097	.070	.190	1	
10. Dysfunctional Competition	.175	-.016	.059	-.200	.027	.044	-.061	.006	.067	1

** Significant at .01 level

* Significant at .05 level

Note: standardized scores of the variables were except for the control variables.

Table 3 Regression Models 1 and 2 (Firm Performance as Dependent Variable)

	Model 1				Model 2							
	Step 1		Step 2		Step 3		Step 4		Step 3		Step 4	
	B	t	B	t	B	t	B	t	B	t	B	t
Constant	-.236	-1.086	-.134	-.724	-.194	-1.052	.174	-.943	-.159	-.866	-.144	-.718
Control Variables												
Firm Size	.003	1.855	.001	.616	.000	.362	.000	.186	.001	.692	.001	.616
Firm Age	-.002	-.104	.012	.922	.014	1.085	.015	1.136	.011	.834	.011	.785
Number of Market Segments	.004	.365	.001	.146	-.001	-.141	-.003	-.345	.004	.415	.002	.182
Independent Variables												
Internal R&D Investment			.243	1.941*	-.222	1.810*	.283	2.167**	.236	1.912**	.232	1.713*
Product Upgrades Intensity and Radicality			.486	3.462***	.480	3.494***	.376	2.497**	.476	3.421***	.469	3.084***
Copyrights			.291	2.387**	.283	2.371**	.144	.980	.296	2.456**	.292	2.261**
External Sources			.116	.944	.076	.618	.188	1.390	.113	.933	.111	.846
Moderating Variable												
Institutional Support					.255	1.663	.338	2.120**	.190			
Dysfunctional Competition										1.390	.198	
Moderating Effects												
Institutional Support X Internal R&D Investment							-.183	-1.001				
Institutional Support X Product Upgrades Intensity & Radicality							.166	.959				
Institutional Support X Copyrights							.230	1.477				
Institutional Support X External Sources							-.194	-1.185				
Dysfunctional Competition X Internal R&D Investment											-.034	-.207
Dysfunctional Competition X Product Upgrades Intensity & Radicality											.068	.370
Dysfunctional Competition X Copyrights											.051	.326
Dysfunctional Competition X External Sources											-.031	-.215
ΔR^2			.341		.039		.062		.028		.004	
R^2	.078		.419		.458		.520		.447		.451	
Adjusted R^2	.014		.315		.344		.351		.331		.257	
F	1.214		4.019***		4.021***		3.072***		3.842***		2.327**	

*** Significant at .01 level **Significant at .05 level * Significant at .1 level

Table 4 Regression Models 3 and 4 (Firm Performance as Dependent Variable)

	Model 3						Model 4			
	Step 1		Step 2		Step 3		Step 2		Step 3	
	B	t	B	t	B	t	B	t	B	t
Constant	-.236	-1.086	-.320	-1.483	-.254	-1.218	-.264	-1.221	-.209	-.903
Control Variables										
Firm Size	.003	1.855*	.002	1.581	.001	.950	.003	1.918*	.002	1.653
Firm Age	-.002	-.104	.002	.124	.005	.256	-.003	-.184	-.001	-.095
Number of Market Segments	.004	.365	.000	.016	-.003	-.333	.007	.629	.001	.122
Moderating Variable										
Institutional Support			.336	1.888*	.421	2.336**	.222	1.349		
Dysfunctional Competition									.205	1.115
Moderating Effects										
Institutional Support X Internal R&D Investment					-.011	-.057				
Institutional Support X Product Upgrades Intensity & Radicality					.189	1.045				
Institutional Support X Copyrights					.330	2.212**				
Institutional Support X External Sources					-.204	-1.240				
Dysfunctional Competition X Internal R&D Investment									.010	.055
Dysfunctional Competition X Product Upgrades Intensity & Radicality									.202	.948
Dysfunctional Competition X Copyrights									.175	.983
Dysfunctional Competition X External Sources									.010	.060
ΔR^2			.072		.144		.038		.038	
R ²	.078		.150		.294		.116		.154	
Adjusted R ²	.014		.069		.146		.032		-.024	
F	1.214		1.855		1.981*		1.383		.864	

** Significant at .05 level * Significant at .1 level

"Beyond the Science Enterprise Challenge", the story so far; evidencing the success of one enterprising centre

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The purpose of this paper is to provide current evidence of the positive impact and success of enterprise education developed and delivered by one of the original 13 Science Enterprise Centres (Manchester Enterprise Centre), setup as part of the UK Science Enterprise Centre (UK SEC) Initiative. A survey was developed and sent out to all graduates alumni 2001-2008 who took Enterprise modules as part of their main undergraduate studies while at the University of Manchester. Tentative analysis shows that students who took enterprise modules have benefited by increased levels of employability upon graduation.

Keywords: Alumni, Enterprise Education, Science Enterprise Centre Initiative

Track: 5. Technology and Knowledge Intensive Entrepreneurship

- ENTREPRENEURIAL INITIATIVES AS THREATS - HOW SEASONED INDUSTRY ACTORS HINDER REGIONAL RESTRUCTURING

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The aim of this paper was to further understanding of regional restructuring and revitalization by illustrating how opportunities for regional renewal may be reduced by rigid threat responses by a region's established actors within declining industries. In an inductive case study of new biorefinery industry initiatives in a region where traditional forestry industries were in decline, we outline how new industry players that created new ways of using existing resources sparked rigid threat responses among established actors. When seasoned industry actors framed new industry initiatives as threats, they responded by (a) reducing new industry actors' possibilities for new business development, (b) engaging in entrenched resistance, (c) creating collaborative illusions, and (d) undermining the fundamentals of the new industry. Our study contributes to literature by applying the threat-rigidity thesis on a regional level and by illustrating that conflicting behaviours between new and established industry actors can make restructuring and revitalization problematic.

Track: 13. Restructuring and Revitalization

Drivers for liquidation and transfer in small firms: Theory of Planned Behavior and firm conditions

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Abstract

Recently Leroy et al. (2008) tested if the Theory of Planned Behavior (TPB) predicts exit behavior of entrepreneurs: liquidation or transfer. He added the purchasers view to the TPB: firm viability and intangible assets. We retested Leroy et al. hypotheses on a more refined dataset of 136 firms in another country. Our study confirms the finding of Leroy et al.. We find though that the firm's viability, the intangible assets and the client base are better predictor than intentions from the TPB. Other operationalizations may explain the different outcomes.

Keywords: exit, transfer, liquidation, small firm, TPB, entrepreneur

Introduction

The exit of the entrepreneur is a crucial moment in the life cycle of any firm (Cardon et al., 2005). In exits there are two main options: transfer or liquidation. If the entrepreneur opts for transfer the firm is continued under different ownership, otherwise the firm is liquidated. Demographic statistics inform us that the average age of entrepreneurs is quite high in the EU. The European Commission estimates that a third of all entrepreneurs will engage in exit in years to come (EU, 2003; 2006). These pending exits are expected to result in the restructuring of sectors and destruction of entrepreneurial and financial capital (EU, 2003).

Recently Leroy et al. (2008) tried to explain why entrepreneurs opt for transfer or liquidation, using the Theory of Planned Behavior (TPB) of Ajzen (1991; 2002; 2006) adding business viability and intangibility. Viability of the firm and intangible assets are variables that which are in the domain of the purchaser. We like extend and improve the framework of Leroy et al. (2008) by adding more markets variables and like deal with some flaws in Leroy et al. (2008) dataset.

First we will discuss the relevance of this study than we will consider theoretical issues and derive our hypotheses. Having set our framework will test our hypotheses on a dataset of 136 Dutch entrepreneurs.

Relevance

Entrepreneurial exit has received limited attention (DeTienne, 2008). The choice of the entrepreneur between a transfer or a liquidation affects many others. Entrepreneurial exits have important implications for the emotional welfare of the entrepreneur, his spouse and his family (Flören, 2002; Sharma et al. 2003). It also has a serious impact on customers, suppliers and employees (Gimeno et al., 1997) especially when the firm is liquidated. On top of that there are challenging macro economical forecasts. Due to the age of entrepreneurs in the EU about one third of all SMEs will engage in exit in years to come (European Commission, 2003; EU, 2006). As in many other this are mainly micro firms having less than 10 staff (Van Teeffelen, 2007b).

Petty (1997) suggests that transferring the firm increases higher economic wealth and more psychological well-being for the entrepreneur compared to liquidating. There is evidence for that suggestion of economical wealth in The Netherlands. Transferred businesses outperform starting business on mortality, turnover, profit, innovativeness and employment (Meijaard, 2007; Van Teeffelen, Meijaard and Geerts, 2005). One could look at

entrepreneurial exits as great opportunity to economy like Dyck et al (2002). Dyck et al. argue that change of ownership enhances the vitality and performance of economies and firms. One could also see entrepreneurial exits as a threat: failed transfers may result in a restructuring of sectors and could lead to substantial destruction of employment, tangible and intangible capital (EU, 2003). In either way entrepreneurial exits are considered to be of importance for the economical development of countries.

Recently Leroy et al. (2008) started to test why entrepreneurs opt for transfer or liquidation using the Theory of Planned Behavior (Ajzen, 1991). The TPB states that attitudinal beliefs, social norms and perceived behavioral control toward the exit choice determine intentions, which in turn predicts exit behavior. Leroy et al. (2008) found that the TPB predicts exit behavior very well. By adding firm viability and intangible assets Leroy et al. (2008) improved the model considerably. Firm viability and intangible assets are variables which represent the purchasers perspective (Leroy et al., 2008). Firms with a low performance and a high dependency on the owner manager are will be less attractive to purchasers in general and financial institutions that have to (partly) finance the transfers. We feel that the purchasers view is not as well develop yet as the entrepreneurial choice. The market place for demand and supply of firms, market and economical conditions are seen vital for business transfers in general (EU-Commission, 2003; Geerts, Herrings and Peek, 2004; Kommers and Van Engelenburg 2003, Langman and Lugt, 2005; Meijaard, 2007; Van Teeffelen, Meijaard and Geerts, 2005).

Theory

TPB

The Theory of Planned Behavior was developed to model conscious, individual decision making and behavior based on careful consideration of available information (Ajzen & Fishbein, 1980). Main assumptions of TPB is that a significant amount of behavior is intentional and under control of the actor. Intentions are a person's motivation, willingness to exert effort, and try hard. Intentions hence serve as a behavioral plan that mediates between attitudes and actions (Ajzen, 1991).

When applied to transfer outcomes, TPB models define three variables that impact the transfer of an entrepreneurial venture: the personal desirability of a transfer to the entrepreneur (*personal attitude*), the social acceptability of a transfer to a normative reference group (*subjective norms*) and the perceived feasibility and control of an actual transfer

(*perceived behavioral control*). Behavioral intentions to initiate a transfer will mediate the impact of these variables on an actual transfer outcomes (Ajzen, 1991, Krueger et al., 2000).

In a business setting, TPB has been successfully used to explain entrepreneur's start-up intentions (Krueger et al., 2000) and outcomes (Kolvereid & Isaksen, 2006), as well as exit intentions (DeTienne, 2008) and intentions to family succession (Sharma et al., 2003). Krueger et al. (2000) argue that the TPB-model is particularly applicable to exit decisions, since is a rare event in the entrepreneurial life cycle and involves time lags between the intentions and the actual outcome. Exit behavior, therefore, is assumed to be less influenced by automated habits (Conner & Armitage, 1998). Exit intentions hence predict actual exit behavior.

We choose to substitute intentions by the amount of exit planning. We know TPB is vulnerable for a retrospective research design (Ogden, 2003; Norman & Conner, 2005) testing the intentions and attitudes after the behavior has occurred. This is shown by very high inter correlations between attitudes, intentions and behavior. Subjects bring their original behavioral choices in accordance with their intentions and attitudes. This clearly is the case in our dataset¹. Rhodes et al. (2006) finds that intention and planning items are largely exchangeable. Theoretically planning can be considered as more specific than the more general exit intentions.

Is planning as proxy for intentions relevant for exits? Mintzberg (1994) and Bhidé (2000) have challenged the value of strategic planning in business environments. More specifically, they question whether planning is always the rational process it appears to be, suggesting that strategic decisions are an ongoing process (Weick, 1995). We assume that some sort of planning is necessary for a relative rare and complex event as a transfer. Transfers are known to be a complex process combining legal, tax, financial, market situation, organizational and emotional aspects involving a buyer, a seller, advisers, staff, customers and suppliers (EU, 2003; Kommers and Van Engelenburg, 2003). In business transfer literature our assumption is widely shared by scholars, researchers and practitioners who stress the importance of planning

¹ This was also the case in our study being retrospective in nature. Our original intention was to test the full TPB model. We found extreme high correlations between attitudes and intentions (0.85) and intentions and exit behaviour (0.92), indicating both attitudes, intentions and behaviour represent one concept. Structural Equation Modelling of the TPB was further obstructed by the loss of one third of our dataset to test the full TPB. The missing values on items on attitudes and perceived behavioural control were caused by entrepreneurs who were forced to liquidate because of decreasing performance. These entrepreneurs indicated the attitude an perceived behavioral control items where irrelevant to them. Also Leroy et. (2008) also found that entrepreneurs in forced liquidations don't answer these items. This strengthens us to believe that exit choice are also non volitional.

(Flören, 1998; Goldberg and Woodridge, 1993; Kets de Vries, 1993; Kirby and Lee, 1996; Kommers & van Engelenburg, 2003; Landsberg, 1988; Le Breton-Miller et al., 2004; Meijaard 2004; Meijaard et al. 2005; Mandelbaum, 1994; Reece, 2004; Rue and Ibrahim, 1996; Seymour, 1993; Sharma et al., 2001; Stavrou, 1996). Empirically the relations between planning and outcomes are still inconclusive on firm exits (Butler et al., 2001; Kesner and Sebor, 1994; Sharma et al., 2003; Shen and Cannella, 2003, Van Teeffelen, 2007a, 2007c). Nevertheless we think planning as a proxy intention predicts the likelihood of a transfer.

Hypothesis 1

Exit planning - as proxy for intention - has a positive impact on the likelihood of a transfer.

Purchasers view: market and firm conditions

The TPB assumes that behavior – in our case liquidation or transfer - is conscious and exit is a volitional choice. We think that's only partial true. The models of Le Breton-Miller et al. (2004) and Meijaard et al. (2005) on business transfers indicate that market conditions are of importance. Some studies indicate that a fair part of the entrepreneurs liquidate because of poor business performance (Van Teeffelen, 2008) and that the number of transfers in economical growth conditions are higher than in economical decline (Meijaard, 2006). Financing transfers is a major issue in European business transfers, since entrepreneurs heavily depend on banks to finance transfers (EU-Commission, 2003; Geerts, Herrings and Peek, 2004; Kommers and Van Engelenburg 2003, Langman and Lugt, 2005; Van Teeffelen, Meijaard and Geerts, 2005; Van Teeffelen, 2009). Volitional transfers are frequently cancelled if banks don't want to (partly) finance the transfer and may lead to non volitional liquidations.

We believe that the market and the firms conditions are reflected in the purchasers view like firm viability, intangible assets (Leroy et al, 2008; Van Teeffelen, 2008) and the client base of the firm (Van Teeffelen, 2007b). First, we expect that the viability of the firm plays an important role in the exit outcome. Butler et al. (2001) identified historical performance as having an important impact on the transfer outcome. Firms with a good track record of performance are more attractive as takeover targets as they have a proven business concept that is valuable to others (Gimeno et al., 1997). As a new owner, it is easier to operate a business that performs well than to turn around an unviable business.

Hypothesis 2. Firm viability positively impacts the likelihood of a transfer.

Intangible factors such as product know-how, expertise and personal customer relationships are important in business. The firm's intangible assets are intimately linked to the entrepreneur as an individual (Gimeno et al., 1997). It is difficult for outsiders to assess the value of intangible assets (Nelson & Winter, 1982) and their non-teachability (Zander & Kogut, 1995) make it more difficult to transfer them to a third party. These assets have a high probability to disappear from the organization once the entrepreneur exits.

Hypothesis 3. Intangibility of firm assets negatively impacts the likelihood of a transfer.

Another type of vulnerability is the client base. If one is dependent of one or only a few clients, losing a single customer jeopardizes a complete firm. Van Teeffelen (2007b) found that most transferred firms have in general a wide client base and their turn over is not dependent small proportion of their customers. It seems that firms with a small client base are less attractive from the purchaser's perspective.

Hypothesis 4. A smaller client base negatively impacts the likelihood of a transfer.

Previous flaws

There are also some limitations to the previous study of Leroy et al. (2008). In data Leroy et al (2008) the entrepreneurs assigned to transfer were in fact the succeeded transfers. Failed transfers couldn't be detected in the dataset. The assigned choice of liquidation is likely to be contaminated with these failed transfers. Also the firms that still continue, but failed in transfer and don't change of owner, were not represented in the Leroy's dataset. This hampers the outcomes of Leroy et al (2008) study.

Leroy's et al. (2008) study also was limited in scope because it is a Belgium dataset of entrepreneurs. We don't know if their findings are valid in other countries.

To overcome this we collected data in The Netherlands of both failed, succeeded and liquidated small firms before the credit crunch.

Research Method

Sample

For the liquidated firms we randomly draw a sample of 1900 firms out of the registry of the Dutch Chambers of Commerce, looking at the period of 2005 - 2007. We only considered liquidations from firms that survived the first five years after their start up and didn't go bankrupt. Tracing the phone number of former business and getting in contact was the hardest part. Out of 100 firms only 49 owners could be traced and of these 49 owners only 16 could be contacted in three attempts to call. Of these 16 former business owners 5 agreed to participate, which gives us a response of 31%.

From this random dataset we found that not all firms were actually liquidated. 26 entrepreneurs had chosen to transfer their business, out of which 15 succeeded and 11 failed and had to liquidate because of the failure. We did enlarge the data of transfers by contacting 50 accountancy firms and business brokers to supply us with contact of failed and succeeded transfers. It's not hard to imagine they were not particularly eager to be a liaison for failed transfers, since that might reflect negatively on their services. In all they supplied us with 33 entrepreneurs (out of which 15 failed transfers but all were still in business and 18 succeeded in transfer). These 33 entrepreneurs, who all agreed to answer our questions, were tested against the random collected group entrepreneurs who chose to transfer. They did not deviate on characteristics like staff, transfer age, sector, education and gender in a two way T-Test.

In all we surveyed 143 Dutch entrepreneurs: 59% for liquidation and 41% for transfer. 15% of the entrepreneurs that liquidated their firm reported this we because of a failed transfer. We assigned them to transfer as exit, since that was their original choice. As we can see in Table 1 we have both succeeded and unsucceeded transfers in our sample. 76% of the entrepreneurs exited in the period of 2005 to 2007. Both manufacturers and service firms were represented in our sample. The average age of entrepreneurs is 53 years old. The average number of staff is 7. The sample is biased self employed, since only 33% of the entrepreneurs in the Netherland is without staff (Van Teeffelen, 2007b).

Table 1: Sample characteristics

	%	mean	sd	n
Firm size		7,09	25,05	143
micro (0-9)	84			
self employed	53			
(1-9)	31			
small (10-49)	13			
medium (50-100)	3			
Sector				143
industrial	44			
service	56			
Exit type				143
liquidations	59			
transfer	41			
succeeded	23			
failed	18			
Years of ownership		11,65	7,50	143
0-9	44			
10-14	27			
15-19	12			
20-	8			
Age		53,10	10,06	143
25-45	24			
46-55	28			
56-65	40			
66-67	8			
Transfer year		2006	2,49	143
before 2000	5			
2000-2004	19			
2005	15			
2006	29			
2007	47			

Operationalizations

We designed the survey questionnaire based on scales validated in our previous research (Leroy et al, 2008; Van Teeffelen, 2007b).

Dependent variable

We define a business transfers as a change or ownership of a firm to another person or enterprise assuring the continuous existence and commercial activity of the enterprise (Sharma et al., 2003) were more than 50% of assets are transferred, while excluding ownership transfer between spouses (Van Teeffelen and Driessen, 2007a). To prevent confounding with starting business, we define liquidations as firm closure more than five years after the start up and not for reasons of bankruptcy.

Although the registry of the Chamber of Commerce and our contacts with accounts and business brokers supplied us with the exit behavior already , we checked if this was correct. We found that 11 entrepreneurs that liquidated their firm in our dataset were in fact failed transfer. We assigned them to transfer as exit, since that was their original choice. Failure was defined as not being able to transfer the assets to another owner. Not all failures lead to liquidation since we also have 15 entrepreneurs in our sample that failed in transfer but were the firm still operates.

Exit planning as proxy for intention

We adopted 5 planning items from previous entrepreneurial exit studies (Sharma et al., 2003; Meijaard et al, 2005). The 5 items (Cronbach $\alpha = 0.80$) assess implicit and explicit planning and in the orientation and preparation phase of the exit (Van Engelenburg, 1998; Dutch Chamber of Commerce, 2002) on a five point Likert scale ranging from not at all to fully:

- did you collect information the exit
- did you consult an advisor on the exit
- did you assess strength/weaknesses and opportunities/threats of your firm
- did you have a plan for exit in mind
- did you have a written plan for exit

The average scale score is 2,23 on a five point scale with a standard deviation of 1,11.

Purchaser's perspective as proxy for market conditions

For viability, intangible assets and client base we defined single items on a five point Likert scale. For viability we asked for the turn over in the year before the exit (very bad – very good, $m=3,12$, $sd= 1,05$), for intangible assets we asked if the firm before exit could operate without the attendance of the owner-manager (not at all – fully, $m= 1,85$, $sd= 1.62$)

and for client base we asked to what degree the firm was depend of one or several customers (not at all – fully, $m=2.27$, $sd=1,39$).

Control variable

We asked for the number of employees besides the entrepreneur active in the year of exit, since staff increases the likelihood for transfers in micro firms (Leroy et al., 2008).

From Table 2 we can see all independents correlate moderately to highly with exit choice. Both viability and client base have relative low correlations with other independent variables. Planning does strongly correlate with the exit behavior. This gives us no information yet about the importance of planning since we use a binomial logistic regression - having a dichotomy as dependent variable (liquidations or transfer) - testing an S-curve and not a non-linear relation.

Table 2: Pearson correlations of dependent and independents

	exit choice	staff	planning	int. assets	turn over	client base
exit choice	1,00					
staff	0,41 **	1,00				
planning	0,65 **	0,42 **	1,00			
intangible assets	0,51 **	0,36 **	0,45 **	1,00		
viability	0,26 **	0,23 **	0,22 **	0,21 **	1,00	
client base	-0,35 **	-0,12	-0,23 **	-0,20 *	-0,25 **	1,00

* p<0.05 ** p<0.01 exit: 0 = liquidation, 1 = transfer

We will test hierarchical to see if the purchasers view does add significantly to the explained variance of planning as a proxy for intention. Due to missing values the dataset for testing was reduced to 136 firms.

Results

Table 3 shows that all our hypotheses are confirmed. The table shows both the original logistic coefficient (B) and the exponentiated coefficient (Exp B). The logistic coefficient shows the negative or positive relations of the predictor and the exit behavior, the exponentiated coefficient shows the magnitude of each single independent to predictor (Hair et al., 2006).

Table 3: Logistic regression with exit behavior as dependent variable

	I		II		III	
	B	Exp B	B	Exp B	B	Exp B
constant	-1,76 ***	0,17	-4,48 ***	0,11	-5,80 **	0
Control						
staff (control)	0,62 ***	1,85	0,53 ***	1,70	0,34 **	1,40
TPB						
intention			0,26 ***	1,30	0,26 ***	1,29
Purchasers view						
intangible assets					0,82 *	2,28
viability					0,61 *	1,85
client base					-0,68 *	0,51
Nagelkerke R ²	0.59 ***		0.70 ***		0.77 **	
N	136		136		136	
p values are for B and Exp. B		* p<0.05	** p<0.01	*** p < 001	exit: 0 = liquidation, 1 = transfer	

Staff is as significant control variable and good predictor on it's own: more staff increases the likelihood of a transfer. Adding intention improves Nagelkerke's R² significantly. More planning as proxy for intention does increase the likelihood of a transfer. Also the addition of the purchasers view variables improves Nagelkerke's R² significantly. Firm who are less depend on the owner manager, that have a better turn over and are less depend on a small client base are more likely to transfer.

If we like to determine the magnitude of the single factors that predict exit behavior best we need to look at the Exp. B. To get a feeling of the Exp, B a value of 1 adds 0% and doesn't change the probability ($e^0 - 1 = 0$). That of 0.50 and 1.50 changes 50% to probability. The further away on either side of 1 the larger the change. Clearly all predictors representing the purchasers view are more powerful than planning as a proxy for intention. This indicates that the condition of the firm is a more powerful predictor than the individual choice of the entrepreneur.

Conclusion, discussion and future research

Recently Leroy et al. (2008) tried to explain why entrepreneurs opt for transfer or liquidation, using the Theory of Planned Behavior (TPB) of Ajzen (1991; 2002; 2006). He added the purchasers view to the TPB: firm viability and intangible assets. We used planning as a proxy for intention and extended the purchasers view with client base, the degree to which a firm is dependent of one or a few customers. Our dataset was more refined than that of Leroy's et al. (2008) since it could discriminate between failed transfers leading to a liquidation and firms still in operation after a failed transfer.

Overall our study confirms the finding of Leroy et al. (2008) in a different country and with an improved dataset. Number of staff increases the likelihood to transfer. Also planning as a proxy for intention increases the likelihood to transfer as does the general condition of the firm. Testing confirms the purchasers view is a valuable addition to the TPB. Looking with the eyes of a purchaser we see that firms that depend on few customers, that strongly depend on the owner-manager in day to day operations and firms with decreasing performance are more likely to be liquidated. Our study indicates that purchasers view is a more powerful predictor for the exit choice than intention and even the number of staff.

Regretfully we were not able to replicate Leroy et al (2008) study completely. Our dataset shows how vulnerable the TPB concepts are for retrospective testing (Ogden, 2003; Norman & Conner, 2005). The refusal of entrepreneurs in forced liquidations to fill in our items on attitudes and perceived behavior control strengthen our outcomes that exit behavior is only partly volitional. Our results indicate a strong influence of the firm condition on the exit choice. Also previous studies show that liquidations and transfers are dependent on non volitional aspect like market conditions (Meijaard, 2007; Van Teeffelen, 2008). So the TPB, dealing with volitional part of behavior, is only part of the story and market and firm condition need to be addressed.

We think entrepreneurs can benefit from our study. Although exit behavior is dependent on market and firm conditions, entrepreneurs can influence their exit choice. First of all their own intention predicts transfer or liquidation. Self employed entrepreneurs will have more difficulties to sell their firm, because the performance is heavily dependent on their person. This is in line with previous findings (Van Teeffelen, 2007b) which indicate that transferred firms have on average 3 members of staff. Entrepreneurs with two or more staff members can increase the likelihood for transfer if they make their firm less dependent on their day to day

presence. Although a good performance is also depend on market conditions, entrepreneurs can increase the likelihood for transfer by investing their time and effort in a wide client base. Being dependent on one ore a few customers increases the likelihood to liquidation.

Our dataset clearly addresses micro firms and has a bias for self employed. Our operationalizations for intentions and intangible assets differ from that of Leroy et al. (2008) study. This may well explain why we find a weaker magnitude of intentions and a stronger magnitude of intangible assets than Leroy et al. (2008). We also have to be careful to generalize our findings since we have a relative small dataset and our datasets only cover Belgium and The Netherlands so far.

For future research more international testing is needed. We advice researchers to consider prospective testing. This prevents that entrepreneurs bring their attitudes, intentions in accordance with their exit already realized. It also puts our hypotheses to a real in the field. Ryan and Power (2009) take the first steps in this direction by looking at different kinds of exits that entrepreneurs intend prior to their entrepreneurial exit.

REFERENCES

- Ajzen, I. (1991), The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, p.179-211.
- Ajzen, I. (2002), Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior, *Journal of Applied Social Psychology*, 32, p.665-683.
- Ajzen, I. (2006), *Constructing a TPB questionnaire: conceptual and methodological considerations*. <<http://www.people.umass.edu/aizen/tpb.diag.htm#null-link>> accessed 28/12/2007.
- Butler, J.P., Phan, B. Saxberg, B. & Lee, S. (2001), Entrepreneurial succession, firm growth and performance. *Journal of Enterprising Culture*, 9, p.407-436.
- Cardon, M., Zietsma, C., Saporito, P., Matherne, B., & Davis, C. (2005), A tale of passion: New insights into entrepreneurship from a parenthood metaphor. *Journal of Business Venturing*, 20, p.23-45.
- Conner, M., & Armitage, C.J. (1998), Extending the theory of planned behavior: A review and avenues for further research. *Journal of Applied Social Psychology*, 18, p. 1429-1464.
- DeTienne, D.R. (2008), Entrepreneurial exit as a critical component of the entrepreneurial process: Theoretical development. *Journal of Business Venturing*, forthcoming.
- Dyck, B., M. Mauws, F.A. Starke and G.A. Mischke, (2002), Passing the baton: the importance of sequence, timing, technique and communication in executive succession, *Journal of Business Venturing*, 17, p. 143-162
- European Commission (2003), *Final Report of the Expert Group on the Transfer of Small and Medium Sized Enterprises*, Brussels.
- European Commission (2006), *Implementing the Lisbon Community Programme for Growth and Jobs: Transfer of Businesses – Continuity through a new beginning*, Brussels.

- Flören, R.H. (2002), *Cijfers en feiten van het familiebedrijf* [Figures and facts of the family business], BDO, Eindhoven,.
- Flören, R.H. (1998), The significance of family business in The Netherlands, *Family Business Review* 11 (2), p. 121-134.
- Gimeno, J.T.B., Folta, R., Cooper, A.C. & Woo, C.Y. (1997), Survival of the fittest? Entrepreneurial human capital and the persistence of underperforming firms. *Administrative Science Quarterly*, 42, p.750-783.
- Gollwitzer, P.M. (1999), Implementation intentions: strong effects of simple plans. *American Psychologist*, 54, p. 493-503.
- Greabner, M., & Eisenhardt K. (2004), The seller's side of the story: Acquisition as courtship and governance as syndicate in entrepreneurial firms. *Administrative Science Quarterly*, 49, p. 366-403.
- Hair, J., Black, W., Babib, B., Anderson, R. and Tatham, R. (2006), *Multivariate Data Analysis*, Sixth Edition, Pearson Education, Upper Saddle River, New Jersey, USA.
- Kesner, I., & Sebor, T. (1994), Executive Succession: Past, Present & Future. *Journal of Management*, 20, p. 327-372.
- Kets de Vries, M. (1993), The dynamics of family-controlled firms: The good and the bad news, *Organisational Dynamics*, p. 59-71
- Kommers, J. and R. van Engelenburg (2003), *Ruimte in Bedrijfsoverdrachten in Nederland* [Space for Business Transfer in The Netherlands], RZO: Den Haag.
- Kirby, D.A. and T.J. Lee (1996), Succession management in family firms in the North East of England, *Family Business Review* 9 (1), 75-81.
- Krueger, N.F., Reilly, M.D., & Carsrud, A.L. (2000), Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15, p.411-432.
- Landsberg, I. (1988), The succession conspiracy, *Family Business Review*, 1 (2), p. 119-143.

- Langman, M.A. and M.G.H. Lugt, (2005), *Bedrijfsoverdrachten in het MKB, moeilijk of makkelijk?* [SME-transfers, difficult or easy?], ING Bank, Amsterdam.
- LeBreton-Miller, I., Miller, D. & Steier, L. (2004), Towards an integrative model of effective family-owned business succession. *Entrepreneurship Theory & Practice*, 28: 305-328.
- Leroy, H., Manigart, S., and Meuleman, M. (2008), *The planned decision to transfer an entrepreneurial company*, Ghent University/Vlerick Leuven Gent Management School.
- Mandelbaum, L. (1994), Small business succession: The educational potential, *Family Business Review* 7 (4), p. 369-376.
- Meijaard, J. and B.J. Diephuis (2004), *Bedrijfsoverdrachten in het MKB* [SME Business Transfers], EIM, Zoetermeer.
- Meijaard, J., Uhlener, L, Flören. R, Diepenhuis, B., Sanders, B. (2005a), *The relationship between successor and planning characteristics and the success of business transfer in Dutch SMEs*, EIM: Zoetermeer.
- Meijaard, J. (2005b), “Business transfers in The Netherlands”, In Haane, Y. and Snijders, J. (ed.) *Entrepreneurship in the Netherlands, Business Transfer: a new start*, EIM, Zoetermeer.
- Meijaard, J. (2006), *Meer bedrijfsoverdrachten in hoogconjunctuur*, EIM, Zoetermeer.
- Meijaard, J. (2007), *Overnemer vaak beter dan ‘vers’ starten*, EIM, Zoetermeer.
- Norman, P., & Conner, M. (2005), The theory of planned behavior and exercise: Evidence for the mediating and moderating roles of planning on intention-behavior relationships. *Journal of Sport and Exercise Psychology*, 27(4): p. 488-504.
- Ogden, J. (2003). Some problems with social cognition models: a pragmatic & conceptual analysis. *Health Psychology*, 22(4), p. 424-428.
- Petty, J.W. (1997), Harvesting firm value: process and results. In Sexton, D.L., & Smilor, R.W. Eds. *Entrepreneurship 2000*. Chicago, Ill.: Upstart Publishing Company.

- Reece, C.R. (2003), How to mix blood and business safely and successfully, *Journal of Financial Service Professionals*, nov. 2003, p. 29-31.
- Rue, L.W. and N.A. Ibrahim (1996), The status of planning in smaller family-owned business, *Family Business Review*, 9 (1), 29-43.
- Ryan, G. and Power, B. (2009), Exit routes: what are your options?, *In*: Koçak, A., Abimbola, T., Özer, A. and Watkons-Mathus, L. (ed.), *Marketing and Entrepreneurship*, AUMEC 2009, Ankara University.
- Seymour, K.C. (1993), Intergenerational relationships in family firms: the effect or leadership succession, *Family Business Review*, 6 (3), p. 263-281.
- Sharma, P., J.J. Chrisman, A.L. Pablo and J.H. Chua, (2001), Determinants of initial satisfaction with the succession process in family firms: A conceptual model. *Entrepreneur Theory & Practise*, 25(3), p. 17-35.
- Sharma, P., J.J. Chrisman and J.H. Chua (2003), Predictors of satisfaction with the succession process in family firms, *Journal of Business Venturing*, vol. 18(5), p. 667-687.
- Van Teeffelen, A.L.M., Meijaard, J. and Geerts, A., (2005), Business Succession: Economic Disaster of Blessing in Disguise, *Paper presented at the International Council of Small Business Conference, June 2005*, Washington DC, USA.
- Van Teeffelen, A.L.M. (2007a), Do planning and preparation predict success in SME-transfers?, *Paper presented at the International Council of Small Business Conference, June 2007*, Türku, Finland.
- Van Teeffelen, A.L.M. (2007b), *Dutch small business transfers*, HU Utrecht.
- Van Teeffelen, A.L.M. and Driessen, M. (2007c), Transfer success in SME's: are entrepreneurial characteristics of importance? *Paper presented at the RENT XXI Conference*, November 2007, Cardiff, UK.
- Van Teeffelen, A.L.M. (2008), *Dutch small business exits*, HU Utrecht

Van Teeffelen, A.L.M. (2009), Expert opinions on SME transfers: hazards for policymakers and entrepreneurs, *In*: Koçak, A., Abimbola, T., Özer, A. and Watkons-Mathus, L. (ed.), *Marketing and Entrepreneurship*, AUMEC 2009, Ankara University.

The view from below - supporting employees to participate in small firm success

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The success or failure of firms in turbulent environments rests on the interaction of resources and dynamic capabilities. Small firms are particularly vulnerable, but may also be more adaptive. Firm resources and capabilities arising from human capital are seen as differentiating successful small firms. In this exploratory study, we use the perspectives of employees and managers to build a more complete and nuanced view of the interaction of resources and capabilities in the creation of competitive advantage. Using a grounded theory approach, we find that successful firms are characterized by routines and processes consistent with high performance work systems, and that perceived organizational support (POS) complements and extends both the high performance work systems (HPWS) and dynamic capabilities approach to explain strategic advantage.

Track: 13. Restructuring and Revitalization

Jörg Freiling and Martin Gersch*

**The Managerial Vacuum of Business Succession in Family Businesses – An
Evolutionary Angle on Revitalization**

Keywords

Business Succession, Managerial Vacuum, Revitalization, Entrepreneurship Theory, Co-Evolutionary Theory, Path Dependency, SME, Family Business.

Abstract

Why does a managerial vacuum in case of inter-family business succession occur? Latest insights of entrepreneurship theory and path dependency are used to address this research question. Employing a co-evolutionary view, the managerial vacuum will be conceptualized from both the macro and micro level. Path dependency opens the perspective to a process-oriented interpretation of causes, effects, and managerial implications concerning a period of high uncertainty but at the same time of high importance for family businesses. First research propositions summarize and condense the findings and serve as a benchmark of ongoing research.

The Basic Problem

Any business succession changes the managerial structure of the family business involved considerably. The respective firms undergo a process of organizational change with an open end. In many cases business successions end up in struggles for organizational survival (García & Lopez 2003; Carney & Gedajlovic 2003). From an entrepreneurial perspective, however, business succession can also pave the way for revitalization by replacement of the former managing owners by new entrepreneurs. This opportunity should be considered by the

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whole personal network of the firm. It is argued that in research on business succession this aspect is relevant as well – but largely ignored.

This research paper states that every business succession involves a so-called *managerial vacuum*, i.e. a transition phase from the former owner(s) to the new one(s) with a state of under-managed processes (Handler 1994; Howorth et al. 2007). This managerial vacuum seems to depend to a large extent on (1) the degree of familiarity of the new entrepreneurs with the company involved and (2) the managerial skills available. However, due to incomplete information in connection with limited assets and skills this situation, basically, cannot be avoided. Problems in connection with this managerial vacuum might be manifold. In particular the temporary lack of orientation of the whole company and the conflicts due to different styles of management and different entrepreneurs clearly show that situations might get out of control and cause a severe crisis. The strategic renewal initiated by the new entrepreneurs, however, allow for taking the chances of revitalization.

Although this basic phenomenon is not completely new (Longenecker and Schoen 1978; Ward 1987; Stavrou 1999), it is still under-researched. The basic problem is that research typically focuses on the transition process itself and on the perspectives of the old and new owners respectively (Aronoff and Ward 1992; Marshack 1993; Seymour 1993; Welsch 1993; Whiteside 1993; Chrisman et al. 1998; Feltham et al. 2005). Lower-ranked managers and other employees also play a role when it comes to tackling the problem of the managerial vacuum since they can make important contributions to ‘keep the track’. Approaches from evolutionary theory and entrepreneurship theory tell us that we need to consider the historical context and the surrounding network as well. Moreover, evolutionary theory scrutinizes how far decisions in the past affect the run of events in the future. In particular the research on

organizational paths allows for considering lock-in and lock-out effects in connection with business succession (Arthur 1989). This integrated context of past, present, and future seems to be useful to understand the managerial vacuum comprehensively.

This paper is to outline the nature of the problem of the managerial vacuum and to explain the background. It focuses the case of *inter-family business succession* since this particular type reveals best the peculiarities of the emergence and development of this managerial vacuum. One more reason for this delimitation is the simple fact that intra-family succession processes are much better researched in literature (e.g. Sharma et al. 2003; Brockhaus 2004; Royer et al. 2008; Tatoglu et al. 2008).

Accordingly, the *research questions* of this paper are:

- Why does a managerial vacuum in case of inter-family business succession occur?
- How (far) can the managerial vacuum as a problem be conceptualized?
- What are typical cause and effect relationships that help us to understand the problem?

Methodological Considerations

Due to the under-researched nature of the problem we try to understand it more thoroughly by mirroring it against a selection of commensurable theories. Thus, this paper is conceptual and exploratory. It seeks to identify basic causalities giving a basis and a frame for empirical work following up. Since the managerial vacuum is an organizational phenomenon, we have to go beyond traditional approaches to understand business succession that focus primarily on the entrepreneurs involved (e.g., Stavrou 1999). With the *firm* as the *unit of analysis*, the

paper employs evolutionary theory and in particular *approaches of path dependency* for the purpose of identifying organizational commitments. This step helps to understand why the managerial vacuum occurs in case of business succession. This initial step is accompanied by addressing the managerial vacuum and its proactive management by using *entrepreneurship theory*. Entrepreneurship theory provides us with an understanding of what a firm has to do to arrange a state of competitiveness. To this end, modern approaches of entrepreneurship theory (e.g., Freiling 2008) present a set of entrepreneurial functions that help to conceptualize the entrepreneurship construct. We employ them to address the managerial problems of business succession and in particular to uncover the opportunities of this organizational breakpoint. Combining considerations from path dependency and entrepreneurship theory thus allows for a sound understanding of explicit and implicit organizational commitments as well as the threats and opportunities in connection with business succession.

As for the cause and effect relationships in the context of the managerial vacuum entrepreneurship theory contains a set of causalities (Freiling 2008) that are relevant to business succession as well. In connection with the constructs from approaches of path dependency, we are able to develop a system of propositions guiding future research. At the same time they allow for drawing some first managerial conclusions.

The paper proceeds as follows: Next, we discuss business succession and its managerial challenges in more detail to understand the very nature of the managerial vacuum from a both personal and organizational angle. Afterwards we introduce the formerly chosen theoretical framework and relate entrepreneurship theory to the managerial challenges outlined before.

Another step is to develop research propositions for empirical work following up. Finally, we address implications for research, practice, and policy.

Business Succession and the Managerial Vacuum

Business succession is a managerial issue that can be addressed by the Pettigrew (1987) framework of different facets of organizational (change) phenomena: context, content, and process. Since business succession is an important part of managing organizational change, we can apply the Pettigrew taxonomy in this context without any modification. Thus the following sub-sections exactly proceed in this manner.

Context of Business Succession

Pettigrew (1987) mentions internal and external context issues. Without intending to address the whole range of context factors in the realm of business succession we focus only on those issues with a considerable impact on the managerial vacuum. In this regard in particular internal context factors matter. We already mentioned briefly what the managerial vacuum is about. Next, we focus on the *internal context issues* relevant to the managerial vacuum of business succession in more detail.

Time pressure. In many situations business succession becomes a serious problem simply because of the fact that the firm is not prepared for the transition. The old entrepreneurs very often under-estimate the necessity of planning and managing business successions and tend to ignore possible unfavorable runs of events (e.g. death or severe illness). In case of lacking preparedness, however, the time pressure increases in case of unfavorable events. Urgent solutions have to be found in short time. More important, in those situations the old

entrepreneurs are due to the developments not able to manage the firm the way they did before. At the same time, new entrepreneurs are either not at hand or – at best – available but not familiar with the firm and the specific situation. In case of urgency, therefore, the managerial vacuum appears in a rather paralytic fashion with disastrous consequences.

Role and position of the successor. Internal and external business successions differ largely. Internal modes include at least intra-family successions, management buy-outs, and employee buy-outs. In all cases the successors are familiar with the situation of the firm, and in some cases they are skilled to a high degree so that the managerial vacuum can not unfold a very vulnerable power. This, however, depends to a large extent on skills available that should be treated separately below. Often more problematic is the case of external business succession when new entrepreneurs buy in. This management buy-in is particularly problematic if the successors have no significant industry know-how and only limited information on the specific situation of the target firm via due diligence or comparable assessment procedures. In this context a temporary managerial vacuum can not really be avoided and causes considerable trouble regardless the fact that new entrepreneurs with a background from other industries might trigger useful processes of strategic renewal due to the different experiences they made.

Human and social capital of the old and new entrepreneurs. As already mentioned above, the skills of the entrepreneurs matter much (Chrisman et al. 1998). Lazear (2005) pointed out the multitude of available skills of entrepreneurs by introducing his “jack-of-all-trades” notion. Backes-Gellner and Moog (2008) extended his human capital theory based view by stressing the relevance of social capital. In case of a huge difference between the human and social capital of the old compared to the new entrepreneurs with a skill advantage of the old ones, a

managerial vacuum is more likely. This case is not unusual but represents a major problem of many business successions: The new entrepreneurs are often less experienced. Over and above this, they do not have the social ties the old entrepreneurs had to manage the business of the specific firm. As for the run of the business this problem can be fatal since the lack of network capital can not easily be circumvented.

Number of entrepreneurs involved. As for the managerial vacuum it makes a difference whether a team of old or new entrepreneurs is involved in managing the firm. In particular with regard to the successors a team of new entrepreneurs is in a better position to get the business managed. Lansberg (1988) differentiated among constellations of successorship in family businesses and identified the following types: controlling owner, sibling partnerships, and cousin consortia. Since we focus in this paper on inter-family succession, we can at least transfer Lansberg's basic observation to this setting that over time the number of entrepreneurs managing the firm oftentimes increases. Anyway, problems in connection with the managerial vacuum can be mitigated by teaming up.

Size and age of the firm. Firms that are big and old do not only have a rich tradition but at the same time a higher degree of structural complexity. Hannan and Freeman (1984) addressed phenomena of increasing organizational inertia in connection with age and size. If this holds true, the managerial vacuum is a particular challenge of old and bigger firms due to complexity reasons.

Kind of succession (ownership and/or leadership succession). Although there might be numerous criteria to differentiate constellations of business succession, one important issue is the subject of succession. In some cases only a transfer of capital and ownership takes place

whereas in managerial regards nothing important happens. In other cases, however, the succession refers to leadership issues of the firm. The latter case is the standard one and causes the managerial vacuum.

Besides these internal context factors *external* issues might matter as for the managerial vacuum as well. In particular three different factors have a rather strong impact on managerial challenges and, accordingly, the managerial vacuum: Firstly, environmental dynamism helps to separate turbulent situations from stable settings. In the latter case, managerial issues are controllable whereas in case of high levels of dynamism the managerial challenges can get easily out of control. Secondly, the intensity of competition matters. The more aggressive competitors behave, the more the firm is challenged and under pressure. The managerial problems are considerable so that a temporary managerial vacuum can threaten the survivability of the firm in a succession process. Thirdly, market structure matters. The more the products need to be differentiated, the higher is the coordination task and thus the managerial challenge. The vacuum is higher c.p. when markets are more complex.

Content of Business Succession

Approaching content issues implies to reflect the very nature of business succession. In this regard, business succession is a kind of organizational change that refers to leadership issues. Within the scope of this paper, business succession implies a change not only in ownership but in leadership as well.

More specifically, the succession remarks a transition from one more or less “balanced” managerial situation of the old owner(s) to another “balanced” situation of the new one(s). To arrange a new balance includes a finished procedure of change management. However, what

does such a transition imply? Although general answers can hardly be given facing the numerous different business successions, we can at least describe the organizational layers and elements involved in this change process. It is not unusual to make two distinctions in this respect (Gersick 1991): Firstly, the change can affect organizational surface layers, such as the formal structures, the responsibilities, the systems available and the like, or the deep-rooted structures, such as skills, values, beliefs, or the organizational culture. Secondly and closely connected with the aforementioned aspect, we can differ between formal and informal structures of a firm. Oftentimes, the deep-rooted structures are informal whereas the surface structures are to a high extent formalized. In case of business succession, at least some of the surface and formal structures are affected by the organizational change, since the ownership and the responsibilities can not remain the same. However, many problems of business succession cannot be addressed if we only refer to the formal issues. In particular in connection with the managerial vacuum, important elements of the deeply rooted informal structures change: The new entrepreneurs are not only equipped with a different set of skills. Moreover, they have different mindsets so that the whole strategic logic of the firm will be modified – consciously or unconsciously. In management and organization theory the (rather similar) constructs of the mental models (Kim 1993) or the dominant logic (Prahalad and Bettis 1986) directly address this issue. At the same time the whole value systems undergoes a change. It is open whether major or minor adjustments occur and how they were adopted by the employees. As for the corporate culture similar considerations apply. What is important with regard to the managerial vacuum is the simple fact that all these changes take time and managerial energy. Since the deep-rooted structures are not only opaque but rigid as well, we can assume that it is difficult for new entrepreneurs to manage this change exactly and in due time. As a result, the content issues reveal that the transition goes along with more managerial work for the entrepreneurs while at the same time the whole managerial power is

temporarily not available during the succession. This already leads us to the next facet of business succession, the process dimension.

Process of Business Succession

The process character already transpired in the previous considerations. We have the opportunity to understand business succession in a more formal sense (Handler 1989). Then the process from the official decision of the old entrepreneur(s) until the formal transfer of ownership and leadership to the new entrepreneur(s) is relevant. As already mentioned the problem of the managerial vacuum goes far beyond formal issues. Therefore, we are well advised to understand succession more broadly (Sharma et al. 2000; Le Breton-Miller et al. 2004) and to include earlier steps of preparation by the old entrepreneur(s) as well as problems of the successors when finding the new “balance” after transferring ownership and leadership. When addressing this scope of time we can better understand whether and how far the managerial vacuum appears and develops.

Over and above this, the typical phase structure of business successions can be structured as follows: The first part is the *pre-succession phase*. Pre-succession includes evidence of the old entrepreneurs of the succession problem and first steps of preparation. This evidence triggers first steps of generating succession options and screening new entrepreneurs. It is rather obvious that the pre-succession phase can last very long. However, in other cases rapid pre-successions occur. Rather needless to say, first intentions and actions will be carefully observed and therefore perceived by the stakeholders of the firm. This often causes a managerial vacuum since the environment of the old entrepreneurs notifies that there is something going on. According to this, the activities of the firm might run differently from

this point. Having perceived the first weak signals, the stakeholders prepare themselves for the change to come which might lead to a first break of managerial influence.

The *succession phase* is the second step of the procedure and remarks the shift from general screenings to concrete decisions as to the procedure and the negotiations with potential successors. The succession phase includes the bargaining process and the final decision and ends with the formal transfer of ownership. During this procedure the process of decreasing influence of the old owners continues – sometimes creeping, sometimes dramatically. At the same time it is possible that the successors already gain certain impact on the run of events. This, however, is typically not enough to avoid the managerial vacuum that becomes a big issue in the succession phase.

Afterwards, the *post-succession phase* begins. Although the formal transfer of ownership already took place the transfer of leadership might be lacking. The reason for this is the phenomenon of the “shadow of the old entrepreneurs” that causes a kind of administrative heritage (Collis 1991). Having managed the firm for a long time and being familiar with often all the employees it is simply unrealistic to assume that the formal transfer of ownership cuts the influence of the old owners completely and immediately – independent from the new formal state of corporate governance. It is more a process of a shadow of the old entrepreneurs slowly fading and vanishing – and not abruptly ending. At the same time the successors gain more and more influence so that the managerial vacuum is often only a temporary phenomenon – as long as the new entrepreneurs are able to find a new “balance”.

So far, we highlighted a typical run of events that includes a managerial vacuum. Under-managed, this vacuum might cause a severe corporate crisis. However, we should not ignore

the multitude of alternate run of events. In particular, a vacuum can be completely avoided if the old and new entrepreneurs find a way joining their managerial forces or to fill existing gaps by interim management. Being aware of this issue can, oppositely, make the management stronger than before and after the succession. However, this is a rather optimal and unlikely constellation. More likely is a state of a partial vacuum of temporary nature. The character is partial since at least one party (old or new entrepreneurs) care for the managerial duties of the firm. Unlikely but not impossible is the state of a total vacuum when both the old and the new entrepreneurs do not care for executing managerial tasks. Being confronted with other issues in the wide realm of succession certain duties get out of sight. Although unlikely, such a situation is highly dangerous.

- insert table 1 about here -

Table 1 displays an overview of the mentioned context, content, and process issues of business succession. What can we learn from this initial discussion on the managerial vacuum of business succession? Firstly, we can assume that this problem most frequently challenges the succession processes. However, we already learned that this is not necessarily so and that the entrepreneurs involved have certain means to avoid any kind of vacuum. Secondly, the managerial problem is predominantly a problem of the succession phase. However, this is obviously only a half-truth. Before the formal succession procedure takes place, the old entrepreneurs lose managerial power when triggering the pre-succession phase with a perceptible purpose by other stakeholders. Besides that, a managerial vacuum is a problem of the post-succession phase as well since the new entrepreneurs often do not unfold their managerial power instantly.

So far, the considerations suggest that the occurrence of a managerial vacuum is a phenomenon that in most cases appears and cannot easily be avoided. Is this deterministic view really adequate? It is not reasonable to assume that all these problems can be easily avoided. However, firms and the entrepreneurs involved have some discretion to manage the problems we outlined above. Insofar a moderate voluntaristic perspective seems to be more adequate to consider both the restrictions due to the embeddedness of the firm and the chances based on entrepreneurial moves. It transpires that such a view is closer to reality. Accordingly, the theoretical frame of reference takes this consideration into account.

It seems that certain factors might cause this managerial vacuum. It deems necessary to understand these factors. This requires going beyond descriptions by analyses and predictions. To this end, we select adequate theories that address managerial issues in a moderate voluntaristic fashion over time.

The Managerial Vacuum in the Light of Evolutionary and Entrepreneurship Theories

Basics of Entrepreneurship Theory

The nature of the managerial vacuum as a phenomenon has been outlined above. We can sum up that this vacuum is highly context specific. One can find similar constellations but, in practice, every succession will be different as for this particular problem. Therefore we may call this phenomenon idiosyncratic. Moreover, the run of events is highly relevant to the managerial problems that occur. This implies to use evolutionary theories since they consider developments and dependencies over time and, in particular, potential self-reinforcing effects. Finally, business successions should not be treated as totally context dependent. Instead the managerial discretion of the entrepreneurs involved should be explicitly

considered. To this end, we employ theories of the moderate voluntaristic kind as mentioned above. Finally, relevant theories need to touch on managerial issues to locate and explain the vacuum.

As we will show in more detail below, entrepreneurship theory – and approaches of path dependency as well – fit into this cluster and pass the test based on the mentioned criteria. However, entrepreneurship theory does not represent a homogeneous theoretical body but a frame of different research traditions that are tied together by the crucial question of the functions of the entrepreneur. In particular, the theory of the entrepreneurial functions claims that the execution of the relevant entrepreneurial functions explains performance effects in terms of business and/or economics. This research tradition was founded by the seminal work of Cantillon (1755). We do not intend to present a complete overview of all the facets of entrepreneurship theory (for such an overview see Hébert and Link 1988). However, based on prior contributions we structure the heterogeneous content of entrepreneurship theory by raising four questions that are relevant to our core discussion.

(1) What are the functions the approaches of entrepreneurship theory deal with?

In the long history of entrepreneurship theory both static (e.g. ownership) and dynamic (e.g. innovation) entrepreneurial functions played a role. However, it is maybe one main result of entrepreneurship research that only the dynamic functions are crucial to an understanding of role of entrepreneurship in competition. Thus it makes sense to focus on dynamic functions henceforth. Within the scope of dynamic functions many proposals have been made – as e.g. Hébert and Link (1988) pointed out. Once again, not all of these functions are really relevant in the same way. When reviewing the catalogues of numerous functions under discussion, only a limited set of functions seems to cover the scope of managerial issues in competition.

In this regard, Barreto (1989) proposes to focus on a set of four functions, namely the innovation, coordination, arbitrage, and risk taking function. In later parts of this section we will come back to this proposal again.

(2) Of how many functions do the concepts consist?

The concepts differ to some extent by the kind and number of functions in use. Table 2 displays three different categories in this regard: Firstly, the mono-function approaches focus on one and only one managerial topic and consider it relevant to reflect the most decisive issue in competition. There are many prominent entrepreneurship researchers belonging to this branch: Among them we can find Cantillon (1755) and Knight (1921) with their focus on the function of bearing uncertainty or Kirzner (1973) with his particular emphasis on arbitrage. However, when regarding the character of recent competition with an oftentimes high level of turbulence and complexity (e.g. the hyper-competition concept of D'Aveni 1994) as well as numerous simultaneous challenges for entrepreneurs it transpires that the execution of only one function does not seem to be enough to cover the nature of competition completely. One response in this regard is the so-called meta-function approach (Freiling 2008). A meta-function is an integrative set of different sub-functions that are closely connected and collectively respond to a super-ordinate task. Maybe the most prominent meta-function is the concept of innovation developed by Schumpeter (1934). Schumpeter understands innovation in a very broad sense, encompassing product, process, organizational, marketing, and purchasing innovations. Casson (1982) claims for considering the coordination function that is a meta-function as well. Coordination in Casson's view consists of the sub-functions of (1) taking the opportunities of coordination, (2) making judgmental decisions, and (3) market-making. Meta-functions are defined more broadly and go beyond the scope of single entrepreneurial functions. Therefore, they are in a better position to

respond to the numerous managerial challenges in competition – although they can hardly address all the managerial necessity. For the same reason some scholars favor the so-called multi-functional approaches. Schneider (1987) started with a set of three interrelated functions (see table 2): While he considers the entrepreneurial function of taking other people’s uncertainty constitutive for founding and maintaining firms, he refers to the arbitrage function in the Kirznerian sense for maintaining the firm’s subsistence in external affairs and the function of implementing changes in leadership for internal purposes. Schneider’s approach is insofar a crucial milestone of entrepreneurship theory since his approach is able to cover the huge variety of managerial issues in a specific manner while at the same time explaining the emergence and development of firms. His contribution rests to some extent on the simple fact to go beyond functional catalogues without an interrelation of the different functions (like the one of Barreto 1989). Whereas Schneider intends to explain the evolution of the multi-person firm, a more recent approach developed by Freiling (2008) is devoted to address the evolution of the single-person firm as well. Freiling (2008) adopted the functional catalogue by Barreto (1989) and developed an interrelated functional system explaining organizational development the way Schneider (1987) did. We will refer to this approach in our considerations below.

- insert table 2 about here -

(3) What do the approaches primarily intend to explain?

In fact, at least two streams of entrepreneurship theory exist in this regard. The first one focuses on the personal level and, thus, the entrepreneur. Table 2 displays some selected protagonists of the personal approaches: E.g., Schumpeter (1934) focuses on the entrepreneur as an elitist person, equipped with considerable power. Other scholars such as Kirzner (1973)

emphasize personal traits and attributes like alertness. Different from these non-institutional approaches the second stream abstracts from the single person of the entrepreneur. Von Mises (1940) was the first one who de-coupled the execution of entrepreneurial functions from the person of the entrepreneur. More explicitly, the approaches of Schneider (1987) and Freiling (2008) directly state that from the viewpoint of the firm it is not important who performs the functions. It is only vital that an execution takes place at all – more or less independent from single agents within a firm. For the managerial vacuum in case of business successions it is important to say that (almost) every employee has at least some discretion in his work to act entrepreneurially in the sense of executing entrepreneurial functions. Moreover, external parties can provide the firm with managerial support so that in case of a change in leadership a managerial vacuum does not necessarily occur. The discussion reveals that for the purpose of analyzing a managerial vacuum in case of business succession it is useful to employ organizational instead of personal approaches of entrepreneurship theory.

(4) To which basic stream of economic theory do the approaches belong to?

A focal issue of economic theory is the relation to equilibrium thinking. Perfect competition and market equilibrium is the core concept of neoclassic theory. Many economic theories in use still deal with this point of reference – in particular those belonging to the so-called functionalist theories in the sense of Burrell and Morgan (1979). In this regard, we can structure the body of economic theories in four categories: Firstly, the notion of perfect competition and market equilibrium is the paradigmatic basis. In those settings entrepreneurship and entrepreneurs are simply irrelevant since perfect information equals all market participants and entrepreneurial moves have no chance of improving the entrepreneur's individual state. Besides that, secondly a group of theories focuses on the market process and its "balancing" impact. New discoveries cause temporary disequilibria

but the use of knowledge in markets and societies (by employing the market process) bridges gaps between the supply and the demand so that after all a pervasive trend towards market equilibrium exists (Kirzner 1973). Other scholars are skeptical that this trend towards market equilibrium generally exists. Thirdly, Schneider (1987) argues that in an uncertain world it is not possible to predict whether the run of events is equilibrium or disequilibrium oriented. The development is rather open and depends on contingency factors. Fourthly, some scholars promote the notion of an economic development with a vast increase of disequilibria over time – with dramatic consequences as for the economic system (Schumpeter 1942). In the face of the different kinds and multiple faces of uncertainty (Freiling et al. 2008) we share the point of Schneider that we cannot generally predict whether the run of events is (dis-) equilibrium oriented.

Against this background, the positioning of this paper in the landscape of entrepreneurship is complete. Next, we introduce the chosen entrepreneurial theory and relate it to our main topic, the managerial vacuum in case of business succession.

Entrepreneurship Theory and the Managerial Vacuum of Business Succession

We employ a multi-function approach of entrepreneurship theory that addresses the organizational development over time. The approach of Freiling (2008) tackles both the single and multi-person firm. Figure 1 depicts the structure of this approach in the context of the most important issues of organizational development, i.e. (1) the emergence and the permanent renewal of the firm, (2) the protection from the negative impact of uncertainty on the firm, and (3) the utilization of the endowment available to the firm.

- insert figure 1 about here -

It is argued that four entrepreneurial functions respond to these issues in a particular manner. The innovation function, conceptualized similarly to Schumpeter (1934) (see figure 2), allows for both pro-active and reactive moves in competition and, thus, for constant renewal. The innovation function drives major and minor improvements as well. Innovations can open new horizons in competition but at the same time any innovative move implies to bear certain risks so that it is difficult to predict how far the endeavor is profitable after all. Accordingly, the innovation steps need protection by risk management activities. Risk management implies to develop and employ means to recognize, evaluate, and cover risks. The innovation function is particularly devoted to *explorative* activities of the firm. This risk management function accompanies the innovative moves and to some extent enables the firm to proceed in exploration. Insofar these two functions are connected by a common purpose.

While innovation renews the organization and configures the value-added infrastructure of the firm in connection with risk management, the next two entrepreneurial functions are devoted to make the best of this infrastructure available. This is exactly the reason why these functions are *exploitative* in nature. One function is dedicated to manage the firm's interface to the markets (arbitrage), the other function coordinates the run of the internal processes (coordination). The arbitrage function, conceptualized similar to Kirzner (1973), includes the identification of (profitable) business opportunities, sometimes its pro-active shaping to activate latent demand as well, the negotiation and bargaining process, and finally the development of market-relevant assets (see figure 2). Arbitrage in this sense is meant to make the best of the (sales and purchasing) transactions the firm is involved in. As mentioned above, the coordination function only refers to internal issues and is, therefore, much more focused than the meta-function according to Casson's (1982) understanding. The

coordination function consists of structuring and driving the value-added system of the firm, to allocate and permanently reallocate resources, and to provide the employees with a sense-making system to unfold their motivation potential.

- insert figure 2 about here -

Obviously, firm can only survive and be successful if a certain alignment among the entrepreneurial function exists. On a more general level, March (1991) argues that exploration and exploitation are rather different managerial challenges but need to be handled the integrated way. The harmonious interplay of exploration and exploitation is most recently addressed by the construct of organizational ambidexterity (Tushman and O'Reilly 1996; Gibson and Birkinshaw 2004). The other way round, an adequate handling of exploration and exploitation ignoring the external environment is most likely to invoke a managerial gap or vacuum. In the context of the four entrepreneurial functions we can pick up this idea and relate it to the internal alignment of the functions in connection with matching the external conditions. In the next section of the causalities we refer to this consideration once again.

This discussion leads us directly to regard the causalities of the managerial vacuum. This vacuum can be traced back to an insufficient handling of the entrepreneurial functions. Entrepreneurship as a construct independent from a single person but related to the whole organization can be conceptualized as the execution of the four functions that drive the organizational evolution (renewal, protection, exploitation). This implies to care for each of the functions individually and to put them all together into a cohesive whole. Figure 1 explains the firm's competitiveness (and performance) exactly in this manner. In case of business succession different things happen. Referring to the phase-differentiated approach

according to the considerations of the previous section, the problems begin in the pre-succession phase. Despite all situational details, in the *pre-succession phase* the old entrepreneurs will lose parts of their managerial impact. This will directly lead to a worse execution of one or more entrepreneurial functions. One can expect that in particular internal coordination will become much more problematic when the employees discover that there is something going on as for business succession. The same may hold true concerning the arbitrage function, in particular in case of market partners aware of the new managerial constellation and their realistic chances to improve their bargaining processes. Moreover, in case of fading impact of the old entrepreneurs and at the same time no successor at hand the innovative power will typically decrease and the risk management in both explorative and exploitative regards will become a rather challenging endeavor.

Whereas in the pre-succession phase the managerial vacuum as a problem occurs the first time and unfolds its first destructive power, things get worse in the *succession phase*. In this part things become official. The old entrepreneurs find themselves more and more in the situation of the “lame duck” and the succession is still open. Once again the performance of the exploitative function is directly affected since the uncertainty among the staff reaches its top – and the same applies for most of the external stakeholders of the firm as well. Sense-making in such a situation is difficult since such a sense can hardly be separated from the leaders of the firm. One can expect that also exploration efforts will be hampered in this transition state. Although many of the old entrepreneurs will fight this situation their impact will be limited. Thus, the managerial vacuum caused by an insufficient execution of entrepreneurial functions reaches its top in this situation and can cause severe states of organizational crises by an at least temporary lacking competitiveness. This, however, implies that the more a succession gets concrete by advanced negotiation processes between

the old entrepreneurs and the successors a re-activation of the entrepreneurial functions becomes possible. Another interesting question is whether and how far a broad distribution of the execution of entrepreneurial functions might help to mitigate the problem of the managerial vacuum. In this succession phase different runs of events are possible. The more the staff and potential third-parties involved in the execution of the functions behave in a loyal and responsible manner from the firm's point of view, the more we can expect that serious problems of under-managed entrepreneurial functions can be avoided. On the other hand, the succession phase is a state where informal power can be easily redistributed. Thus, the people involved in the execution of the functions can take this chance to improve their personal situation at the expense of the firm.

As for the *post-succession phase* the process of closing the managerial gap is already running. After the transfer of ownership and leadership the new entrepreneurs are involved in finding a new "balance" – also in terms of an internal and external fit of the entrepreneurial functions. This is independent from the question whether the successors stick to the chosen strategic path of the old entrepreneurs or not. In every case they need to find a way to perform the functions. What we can say based on the assumptions of this stream of entrepreneurship theory (Freiling 2008) is that subjectivism implies an unequal distribution of knowledge, skills, and motivation of the agents. Additionally, also the personal network and, therefore, the social capital of the entrepreneurs differ. Taking this antecedent seriously, every entrepreneur performs the entrepreneurial functions his own way. Therefore, at least minor managerial changes can and should not be avoided.

In sum, entrepreneurship theory provides us with a heuristic frame to specify the nature of the managerial vacuum in terms of leadership challenges. This frame allows for addressing both

the personal and the organizational level. As to organizational regards entrepreneurship theory explains how the execution of entrepreneurial functions contributes to organizational development and how far an insufficient performance of the functions causes organizational crises by a lacking competitiveness. Notably, entrepreneurship theory sheds light on the path of organizational development from a *macro* point of view of the organization. The macro perspective takes the firm, the competitors, the customers and suppliers, and the business environment into account. The organizational path seems to be characterized by a managerial disruption that causes the vacuum. The discussion reveals that entrepreneurship theory equips us with some useful cause and effect structures. However, what is still missing is a more precise understanding of the *micro-foundations* of the organizational evolution in case of business succession. To this end, we look for a theory that belongs to the same paradigm (the interpretive paradigm according to Burrell and Morgan 1979) and employ path dependence research in the next sub-section.

Path Dependency and the Managerial Vacuum of Business Succession

The concept of path dependency initially addressed technological trajectories in markets and social fields (David 1985; Arthur 1989). More recently, strategic management adopted path dependent analyses (e.g. Durand 2006; Sydow et al. 2009). The basic reasoning is, firstly, that “history matters” (Teece et al. 1994) so that events in the past have an impact on the run of events in present and future times due to organizational commitment. North (1990) regards path dependence as the consequence of small events and chance circumstances that can determine solutions that, once they prevail, lead to a particular path. Secondly, certain technological or behavioral standards develop over time thanks to self-reinforcing mechanisms that create a certain order in a more or less chaotic situation with several runs of events possible. The driver is a “critical juncture” that frames the running development.

Obviously, certain structures, once they prevail, tend to reproduce themselves. Notably, this reproduction can take place independent from economic criteria of efficiency so that inefficient solutions can undergo a process of retention. It appears to be useful to analyze these mechanisms of path dependency to understand the phenomenon of the so-called “increasing returns” that narrow the channel of organizational development.

This, however, is only one facet of interest in the context of business succession. In fact, we need to understand the “administrative heritage” of the old entrepreneurs and their shadow on the firm in post-succession steps. Therefore, this part of path dependency is relevant to this paper. However, a complete understanding of the phenomenon of business succession from a path dependence angle implies to extent the typical reasoning. What we need to know in this context is how the break or at least the transition in leadership can be explained. To this end, we need to understand how certain trajectories of organizational evolution are modified or – in extreme cases of business succession – how an old path can be redirected, broken and/or a new one created. This is in fact a rather new issue in researching organizational paths. We should keep these phenomena of path changing and path breaking in mind when addressing the change in leadership in connection with business succession.

Before that, we need to introduce the most important causal mechanisms of path research that explain the above mentioned rigidities. From the catalogue of available mechanisms we select those that refer to the entrepreneurial issues under scrutiny. A literature review (Katz and Shapiro 1985; David 1985; North 1990; Arthur 1994; Greif 1994; David 1994; Mahoney 2000; Sydow et al. 2009) reveals the following mechanisms: effects of learning, coordination, complementarity, power, expectations, and investments. Subsequently only those

mechanisms connected with the phenomenon of the managerial vacuum are discussed in more detail.

Learning effects are of pivotal relevance to our debate. Firstly, the old entrepreneurs learned how to do their business and how to handle the performance of the entrepreneurial functions. In this regard, entrepreneurs develop a certain dominant logic (Prahalad and Bettis 1986) how to make decisions to attain certain goals. Sanchez et al. (1996: 10) point out that the strategic logic of a firm

“(...) refers to the rationale(s) employed (explicitly or implicitly) by decision makers in the firm as to how specific deployments of resources are expected to result in (...) attainment of the firm’s goals. All employees within a firm have at least some degree of discretion in the allocation of resources. (...) Thus, the strategic logic of the firm is not an exclusive creation of top managers. (...) the firm’s strategic logic (...) resides at all levels of the firm, and for this reason, a firm’s strategic logic may be subject to inconsistencies across the various activities of the firm.”

Such a mental frame helps the entrepreneurs to select and interpret information and to make decisions based on prior knowledge and experience. This also relates to the execution and the integrative handling of the entrepreneurial functions. The more a logic in use leads to acceptable results, the more mental inertia evolve and restrict the openness for other ways of entrepreneurial action. Secondly, internal and external stakeholders as well get used to the way the old entrepreneurs managed their business. Insofar certain standard procedures and managerial routines evolve and penetrate the organization. Employees get used to this procedures based on specific experience made. So far, we can explain the “shadow of the old entrepreneurs” to some extent with the existence of these logics. Obviously, long phases of learning provide the firm with stability and create mental inertia. Unlearning is time consuming and only makes sense when new mental logics are in position to adequately replace the old ones. This, however, is one major issue in business succession since we cannot expect that the mental logics of the successors are already well adapted to their new

business. More than that, the employees are typically rather unaware of the successors' style and way to manage the business so that the adoption often takes a lot of time. Moreover, the adoption can be inefficient in case of trial in connection with too much error. These micro-foundations are useful to understand the managerial vacuum since the old logics already fade away when the new logics are not perfectly developed or well understood by the (primarily internal) stakeholders. In particular, the execution of the coordination function suffers from this problem. Besides that, not only a vacuum might occur but also a break of the organizational path. The antecedent of subjectivism implies that the logics of the old and new entrepreneurs will definitely differ – at least gradually. Thus, the way of handling entrepreneurial functions will change. This change refers to the content of the execution of the functions as well as the entrepreneurial division of labor with internal and external stakeholders. Based on this we can learn that every business succession bears the potential of breaking current trajectories and, remarkably, of creating new ones – although organizational inertia work.

Another relevant issue of business successions is the fact that all groups of stakeholders hold certain *expectations* on the development of leadership affairs. In early stages of the succession process many different expectations exist – some of them complementary, some of them conflicting. Focus of the expectation is typically the leadership constellation in the post-succession phase. Due to the managerial vacuum the stakeholders are aware of the situation of “reshuffling the pack”, i.e. who performs entrepreneurial tasks and how entrepreneurial functions will be executed undergoes a process of restructuring. By interactions between the old and new entrepreneurs and the other stakeholders of the firm the number of alternative expectations often decreases during the succession process. Over time only a few expectation concepts will “survive”. More important, the remaining expectations

get more powerful and it is not unlikely that some of them become “self-fulfilling prophecies” (Merton 1948). This process highlights the hidden power of expectations and tells us that the new leadership “balance” is only to some extent influenced by the successors. Other parties have sometimes important impact as well. In terms of entrepreneurship theory, the test variations in the minds of the actors do not only influence the real variations but the selection and retention process as well.

Coordination effects create path commitment and are relevant to leadership issues in the realm of business succession as well. Path dependency typically argues that in a social field without any rules coordination is difficult and costly due to behavioral uncertainty of the agents. Rules, practices, and routines structure this social field and foster a smoother run of the activities. As for entrepreneurial issues the same holds true. A new start-up is a rather unstructured organization. The entrepreneur sets standards and provides the firm with a sense of direction – sometimes consciously, sometimes not. Therefore, not only mental frames are established before succession starts but process structures as well. Once in use, they facilitate internal coordination and the way the transactions are managed. Thus, coordination effects have at least a rather “visible” impact on exploitation. However, we can expect that the exploration functions are affected as well. A considerable organizational momentum is the result. Once again, these coordination effects are put in question when succession starts since rules and other procedures are to some extent bound to the leadership personnel and, in particular, the old entrepreneurs. The chance to modify the coordination frame exists only in the succession phase itself and maybe to some extent in the post-succession stage, depending on the power of the successors. The “window of opportunity” is, therefore, not very long open. At least those coordination arrangements that are unfavorable from the (primarily

internal) stakeholders' point of view undergo an assessment and – most likely – an attempt to change the process structures due to the managerial vacuum.

The final effect we consider here is *power*. As long as we tackle leadership issues we address power relations at least implicitly – be it formal or informal power. In case of business succession the constellation is rather clear regarding formal power since formal power is transferred in connection with the transfer of ownership. Whereas as for formal power there is always a rather clear cut and no evident managerial vacuum occurs, the situation turns with regard to informal power. Maybe the informal power is one of the most delicate issues of business succession. Depending on the entrepreneurs involved, situations are possible when the “shadow of the old entrepreneur” is omnipresent and the successor struggle for the respect of the corporate stakeholders. Such a situation produces conflicts and can disturb the run of the processes in the post-succession phase completely. The successors will not be accepted by the staff and the old entrepreneurs are at best virtually present. Thus, a certain dilution of a strategic path might occur and cause a managerial vacuum that cannot easily be filled.

So far, we highlighted the most intuitive mechanisms of path research to better understand the micro-foundations of the managerial vacuum of business succession. We did not address any of the self-reinforcing effects relevant to path dependence due to evidence reasons. Admittedly, a final statement on the relevance of the mechanisms can only be made after empirical research since counter-intuitive results are possible as well. However, based on the considerations of the last two sections we can now briefly present our thoughts on causalities of prepare research propositions for on-going research.

Causalities and Research Propositions

This section directly ties in the discussion on causal mechanisms based on entrepreneurship theory and research on path dependence. The reason for dedicating a separate section on this issue is, firstly, to summarize and condense the above considerations and, secondly, to bring together the macro and micro perspective.

Having defined the entrepreneurship construct as the integrated execution of the four entrepreneurial functions driving organizational development, we may assume that entrepreneurship matters as to performance measures (Freiling 2008).

P1a. The better the entrepreneurial functions are internally and externally aligned, the better the firm's competitiveness and the higher the financial performance will be.

As for the business succession context we need to adapt P1a to consider the problem of the managerial vacuum. Business succession typically implies that a new "balance" of entrepreneurial functions has to be found. The transition process weakens the degree to which the entrepreneurial functions are executed.

P1b. Business succession weakens the execution of the entrepreneurial functions and decreases the firm's competitiveness (and financial performance) at least temporarily.

The discussion on the entrepreneurial functions revealed that the degree to which a managerial vacuum in terms of a poor execution of entrepreneurial functions occurs depends on the distribution of entrepreneurial functions. This should be considered in a separate proposition. If the execution of the functions is bound to the entrepreneurs the managerial vacuum will be very extensive. However, in case of too many persons considerably involved in performing the functions is counter-productive as well.

P1c. The extent of the managerial vacuum depends on the distribution of the execution of entrepreneurial functions so that a broader distribution to a limited number of agents mitigates the vacuum.

When the old entrepreneurs leave the firm, typically a considerable amount of human and social capital will not be available to the firm the way before succession. This expertise cannot be perfectly replaced. However, by sharing the execution of the entrepreneurial functions with external partners with a high level of managerial proficiency many problems can be avoided.

P1d. The more the execution of the entrepreneurial functions is shared with professionalized external parties during the succession process, the more problems of the managerial vacuum can be mitigated.

Notably, the notion of an “entrepreneurial division of labor” by sharing the execution of entrepreneurial functions with internal agents and external parties extends entrepreneurship theory. The connection between entrepreneurship theory and path dependence research is another extension of this paper. In this regard, path dependency sheds light on the micro-foundations and allows for developing propositions as well. From a more general perspective, although path dependency tells us much about an organizational momentum, business succession appears to be a “path breaker” with negative performance implications.

P2a. Business succession causes a break of the organizational path since path creating mechanisms go partially and temporarily out of force which affects economies of scale, scope and speed and, thus, changes – and in most cases decreases – competitiveness.

Initially, we pointed out the voluntaristic touch of the chosen theories. Therefore, the effect of P2a is only one side of the coin. At the same time business succession paves the way to organizational renewal. Accordingly, an activation of the innovation function is a typical by-product of business succession. In terms of path dependence research we can expect that path breaking leads to path renewal – and the opening of new horizons.

P2b. Business succession fosters a strategic renewal of the firm and creates new options by creating a new or renewed trajectory so that in connection with a reactivated innovation function and an accompanying risk management function the competitiveness will increase.

As for the debate on learning effects in the previous section business succession affects not only the available knowledge base of the firm but has a negative impact on internal coordination as well. The reason for this is the fact that the old entrepreneurs fostered the development of a strategic logic that penetrated the firm. It depends to some extent on loyalty and employee satisfaction issues but generally the logic is bound to the entrepreneur so that the succession process will have a negative impact on these results of organizational learning and, thus, on competitiveness. As for the competitiveness implications we have to keep in mind that the successors bring in new sources of knowledge. This knowledge, however, is regularly not well adapted to the firm.

P2c. Business succession negatively influences the outcomes of learning processes and affects the performance of the coordination function so that the competitiveness decreases.

Since the succession process is a transition with considerable uncertainty the stakeholders involved try to figure out how the future will be. Building and discussing expectations with others is a typical process in an uncertain world. However, this process is time consuming and costly. Moreover, expectations have an impact on reality as the phenomenon of the self-

fulfilling prophecy tells us so that a proliferation of the intended strategic path of the successors can occur that is relevant to both exploitative entrepreneurial functions. This can be problematic but can also go along with positive implications – as strategy process research suggests (Mintzberg and Waters 1985).

P2d. Business succession causes strong expectation effects that lead to an increase of coordination costs, to an insufficient handling of the exploitative functions, and, finally, to a decreasing competitiveness.

As for coordination effects the reasoning is quite similar. The difference is that existing coordination mechanisms go at least partially out of force and decrease the coordination capacity of the firm.

P2e. Business succession weakens the power of existing coordination effects, affects the exploitative functions temporarily, and decreases competitiveness.

The last proposition deals with power issues.

P2f. Business succession creates a partial and temporary power vacuum that affects at least the execution of the coordination function and the competitiveness of the firm.

As a next step, the propositions developed within the scope of this paper need substantiation by empirical fieldwork. It transpires that the first steps of empirical work should be more explorative and longitudinal in nature so that we can better understand the complex nature and the time dimension of the managerial vacuum of business succession.

Implications

This paper was devoted to research the above mentioned phenomenon. In this section, however, we would like to shed some light on some selected managerial and political implications.

As for managers and consultants entrepreneurship theory is useful to locate managerial challenges. It seems to be possible to conceptualize and operationalize the entrepreneurship construct different from prior attempts (e.g. Lyon et al. 2000) by employing an integrated set of entrepreneurial functions that can be easier conceptualized and operationalized. Based on this, we can locate managerial problems in case of business succession – and start to consider how to get them fixed. The system of the four entrepreneurial functions allows not only for a precise monitoring of the (integrated) execution of critical functions in the context of organizational evolution but for a context specific management program as well. Next to this, entrepreneurship theory suggests that beside the entrepreneurs other agents are involved in performing the functions. For coping with the problems in connection with the managerial vacuum different approaches can be identified. One way is to prepare the firm for later succession processes by spreading the execution of the entrepreneurial functions beforehand. Thus, different agents learn to master the managerial challenges and to run the business the proven way despite the fact that a succession takes place. This alternative is not unproblematic since the old entrepreneurs have to decentralize power and responsibility to a large extent. Therefore, another way is to distribute the execution of entrepreneurial functions – but only to a rather limited number of agents. This alternative is insofar attractive as it is much easier for the core leadership team to build strong management routines and capabilities. Moreover, the leadership complexity is lower compared to the previous alternative.

Another issue is the external support of business successions. There is, in fact, no general one best way. However, we can identify typical situations where external support is useful or indispensable respectively. In particular in situations when the old entrepreneur is no longer available (e.g. due to death) and a successor not at hand, an interim management is required. However, even in situations with strong inertia skilled external partners are useful to overcome a critical momentum based on their expertise.

As for politicians we raise the question of governance. Since many succession processes have to be managed in the next couple of years, this issue should more actively penetrate considerations on corporate and market governance systems. In this regard, advisory boards and similar institutions help to fix problems before the pre-succession starts. Another issue relevant to the political dimension is the fact that the huge number of successions requires a certain platforms for entrepreneurs involved. Such a platform can be useful to bring interested candidates together by screening and matching procedures and institutionalized by public private partnerships.

References

Aronoff, C.E., and J.L. Ward (1992). “*Another Kind of Hero: Preparing Successors for Leadership*”, Marietta, GA: Business Owners Resources.

Arthur, W.B. (1989). “Competing Technologies, Increasing Returns, and Lock-In by Historical Events”, *Economic Journal* 99, 116-131.

Arthur, W.B. (1994). “Self-Reinforcing Mechanisms in Economics”, in *Increasing Returns and Path Dependence in the Economy*, Ed. W.B. Arthur, Ann Arbor/Mich.: Univ. of Michigan Press, 111-132.

Arthur, W.B. (1989). “Competing Technologies, Increasing Returns, and Lock-in by Historical Events”, *Economic Journal* 99, 116-131.

Backes-Gellner, U., and P. Moog (2008). “Who Chooses to Become an Entrepreneur? The Jacks-of-all-Trades in Social and Human Capital”, Institute for Strategy and Business Economics, University of Zurich Working Paper Series, No. 76. Available at: <http://ssrn.com/abstract=1091089>.

- Barreto, H. (1989). *"The Entrepreneur in Microeconomic Theory"*, London/New York: Routledge.
- Brockhaus, R.H. (2004). "Family Business Succession. Suggestions for Future Research". *Family Business Review* 17, 165-177.
- Burrell, G., and G. Morgan (1979). *"Sociological Paradigms and Organisational Analysis"*, London: Heinemann.
- Cantillon, R. (1755). *"Essai sur la nature du commerce en général"*, Paris: Institut National d'Etudes Démographiques.
- Carney, M., and E. Gedajlovic (2003). "Strategic Innovation and the Administrative Heritage of East Asian Family Business Groups", *Asia Pacific Journal of Management* 20, 5-26.
- Casson, M. (1982). *"The Entrepreneur"*, Oxford: Edward Elgar.
- Chrisman, J.J., J.H. Chua, and P. Sharma (1998). "Important Attributes of Successors in Family Businesses: An Exploratory Study". *Family Business Review* 11, 19-34.
- Collis, D.J. (1991). "A Resource-based Analysis of Global Competition: The Case of the Bearings Industry", *Strategic Management Journal* 12, 49-68.
- D'Aveni, R.A. (1994). *"Hypercompetition"*. New York: The Free Press.
- David, P.A. (1985). "Clio and the Economics of QWERTY", *Economic History* 75, 332-337.
- David, P.A. (1994). "Why are Institutions the 'Carriers of History'? Path Dependence and the Evolution of Conventions, Organizations and Institutions", *Structural Change and Economic Dynamics* 5, 205-220.
- Durand, T. (2006). *"Organizational Evolution and Strategic Management"*, London: Sage.
- Feltham, T.S., G. Feltham, and J.J. Barnett (2005). "The Dependence of Family Business on a Single Decision Maker". *Journal of Small Business Management* 43, 1-15.
- Freiling, J. (2008). "SME Management – What Can We Learn From Entrepreneurship Theory", *International Journal of Entrepreneurship Education* 6, 1-19.
- Garcia Alvarez, E., and J. López Sintas (2003). "Coherence Between Values and Successor Socialization: Facilitating Family Business Continuity" (July 2003). IESE Working Paper No. D/512. Available at SSRN: <http://ssrn.com/abstract=459202>.
- Gersick, C.J.G. (1991). "Revolutionary Change Theories", *Academy of Management Review* 16, 10-36.
- Gibson, C.B., and J. Birkinshaw (2004). "The antecedents, consequences, and mediating role of organizational ambidexterity", *Academy of Management Journal* 47, 209-226.
- Greif, A. (1994). "Cultural Beliefs and the Organization of Society", *Journal of Political Economy* 102, 915-950.
- Hannan, M.T., and J. Freeman (1984). "Structural Inertia and Organizational Change", *American Sociological Review* 29(2), 149-164.
- Handler, W.C. (1989). *"Managing the family firm succession process"*, Ph.D. Thesis, Boston University, Boston/Mass.: UMI Dissertation Services.
- Handler, W.C. (1994). "Succession in Family Business. A Review of the Research", *Family Business Review* 7(2), 133-157.
- Hébert, R.F. & Link, A.N. (1988). *"The Entrepreneur"*, New York: Praeger Publ.

- Howorth, C., M. Wright, and P. Westhead (2007). "Succession, Professionalization and the Staying Power of 'Familiness': A Longitudinal Study of Management Buyouts of Family Firms". Babson College Entrepreneurship Research Conference (BCERC). Available at SSRN: <http://ssrn.com/abstract=1064341>.
- Katz, M.L., and C. Shapiro (1985). "Network Externalities, Competition, and Compatibility", *American Economic Review* 75, 424-440.
- Kim, D.M. (1993). "The Link between Individual and Organizational Learning", *Sloan Management Review* 35(1), 37-50.
- Kirzner, I.M. (1973). "*Competition and Entrepreneurship*", Chicago/IL: Univ. of Chicago Press.
- Knight, F.H. (1921). "*Risk, Uncertainty, and Profit*", Boston/MA: Hart, Schaffner & Marx.
- Lansberg, I. (1988). "The Succession Conspiracy". *Family Business Review* 1, 119-143.
- Lazear, E.P. (2005). "Entrepreneurship". *Journal of Labor Economics* 23, 649-680.
- Le Breton-Miller, I., D. Miller, and L.P. Steier (2004). "Toward an Integrative Model of Effective FOB Succession", *Entrepreneurship Theory and Practice* 28, 305-328.
- Longenecker, J.G., and J.E. Schoen (1978), "Management Succession in the Family Business", *Journal of Small Business Management* 16, 1-6.
- Mahoney, J. (2000). "Path Dependence in Historical Sociology", *Theory and Society* 29, 507-548.
- March, J.G. (1991). "Exploration and Exploitation in Organizational Learning", *Organization Science* 2(1), 71-87.
- Marshack, K. (1993). "Coentrepreneurial Couples. A Literature Review on Boundaries and Transitions among Copreneurs", *Family Business Review* 6, 355-370.
- Merton, R.K. 1948. "The Self-Fulfilling Prophecy", *Antioch Review* 8, 193-210.
- Mises, L. von (1940). "Nationalökonomie", Geneva: Ed. Union.
- Mintzberg, H. and J.A. Waters (1985). "Of Strategies, Deliberate and Emergent", *Strategic Management Journal* 6, 257-272.
- North, D.C. (1990). "*Institutions, Institutional Change and Economic Performance*", Cambridge/Mass.: Cambridge Univ. Press.
- Pettigrew, A.M. (1987). "Context and Action in the Transformation of the Firm", *Journal of Management Studies* 24, 649-670.
- Prahalad, C.K. and R.A. Bettis (1986). "Dominant Logic", *Strategic Management Journal* 7, 485-501.
- Royer, S., R. Simons, B. Boyd, and A. Rafferty (2008). "Promoting Family: A Contingency Model of Family Business Succession", *Family Business Review* 21, 15-30.
- Sanchez, R., A. Heene, and H. Thomas (1996). "Towards the Theory and Practice of Competence-based Competition", in *Dynamics of Competence-based Competition*, Eds. R. Sanchez, A. Heene, and H. Thomas, Oxford: Pergamon, 1-35.
- Schneider, D. (1987). "Allgemeine Betriebswirtschaftslehre", 3rd Ed., Munich/Vienna: Oldenbourg.

- Schumpeter, J.A. (1934). *"The Theory of Economic Development"*, Cambridge/Mass.: Harvard University Press.
- Schumpeter, J.A. (1942). *"Capitalism, Socialism and Democracy"*, New York: Harper & Row.
- Seymour, K. (1993). "Intergenerational Relationships in the Family Firm: The Effect on Leadership Succession", *Family Business Review* 6, 263-282.
- Sharma, P., J.H. Chua, and J.J. Chrisman (2000). "Perceptions about the Extent of Succession Planning in Canadian Family Firms". *Canadian Journal of Administrative Sciences* 17, 233-244.
- Sharma, P., J.J. Chrisman, and J.H. Shua (2003). "Predictors of Satisfaction with the Succession Process in Family Firms", *Journal of Business Venturing* 18, 667-687.
- Stavrou, E. (1999). "Succession in Family Businesses", *Journal of Small Business Management* 37, 43-61.
- Sydow, J., G. Schreyögg, and J. Koch (2009). "Organizational Path Dependence. Opening the Black Box", *Academy of Management Review* 34 (forthcoming).
- Tatoglu, E., V. Kula, and K.W. Glaister (2008). "Succession Planning in Family-owned Business: Evidence from Turkey", *International Small Business Journal* 26, 155-180.
- Teece, D.J., R. Rumelt, G. Dosi, and S. Winter (1994). "Understanding Corporate Coherence: Theory and Evidence", *Journal of Economic Behavior and Organization* 23, 1-30.
- Tushman, M.L., and C. O'Reilly (1996). "Ambidextrous Organizations: Managing Evolutionary and Revolutionary Change", *California Management Review* 38, 8-30.
- Ward, J.L. (1987). *"Keeping the Family Business Healthy"*, San Francisco, CA: Jossey-Bass.
- Welsch, J. (1993). "The Impact of Family Ownership and Involvement on the Process of Management Succession", *Family Business Review* 6, 31-54.
- Whiteseide, M. (1993). "How Families Work Together", Marietta, Ga.: Business Owner Resources.

Table 1. Layers of the Managerial Vacuum of Business Succession

Context Issues of Business Succession	Content Issues of Business Succession	Process Issues of Business Succession
<p>internal context:</p> <ul style="list-style-type: none"> • time pressure • role and position of the successor • human and social capital of the old and new entrepreneurs • number of entrepreneurs involved • size and age of the firm • kind of succession: ownership and/or leadership succession <p>external context:</p> <ul style="list-style-type: none"> • environmental dynamism • intensity of competition • market structure 	<p>object of change</p> <ul style="list-style-type: none"> • change of ownership • change of leadership <p>layers of change:</p> <ul style="list-style-type: none"> • surface layers • deep-rooted layers <p>structures of change</p> <ul style="list-style-type: none"> • formal structures • informal structures 	<p>phases of business succession:</p> <ul style="list-style-type: none"> • pre-succession phase • succession phase • post-succession phase

Table 2. Approaches of Entrepreneurship Theory

	mono-function approaches	meta-function approaches	multi-function approaches
personal approaches	e.g. <ul style="list-style-type: none"> • Cantillon (1755): bearing uncertainty • Kirzner (1973): arbitrage 	e.g. <ul style="list-style-type: none"> • Schumpeter (1934): innovation • Casson (1982): coordination 	Barreto 1989: innovation, risk taking, arbitrage, coordination
organizational approaches	e.g. <ul style="list-style-type: none"> • von Mises (1940): market making 		<ul style="list-style-type: none"> • Schneider (1987): risk-taking, arbitrage, implementing change • Freiling (2008): innovation, risk management, internal coordination, arbitrage

Figure 1. The Freiling (2008: 16) Approach of Entrepreneurship Theory

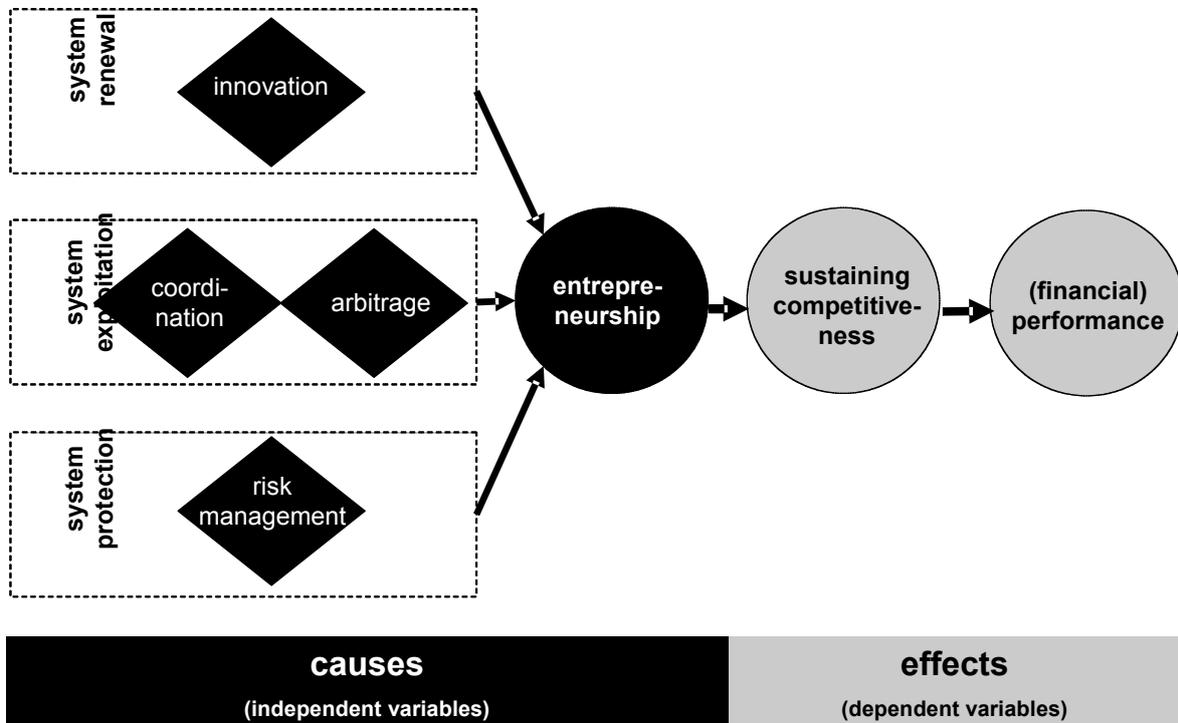


Figure 2. Conceptualizing the Content of the Entrepreneurial Functions

Entrepreneurial Function Criteria	Innovation	Risk management	Coordination	Arbitrage
Role of the function in organizational development	founding and renewing the system	protecting the system	utilizing the system infrastructure (internally)	utilizing the system infrastructure (externally)
Primary nature of the function	explorative	explorative (to some extent exploitative)	exploitative	exploitative
Contents of the functions	<ul style="list-style-type: none"> • product innovations, • process innovations, • organizational innovations, • market innovations, • purchasing innovations, • business model innovations 	<ul style="list-style-type: none"> • recognition of risks, • assessment of risks, • distribution of risks, • transfer of risks 	<ul style="list-style-type: none"> • setting up the value-added process, • orchestrating the value-added process, • allocating the resources, • motivation and sense-making 	<ul style="list-style-type: none"> • shaping business opportunities, • identifying business opportunities, • bargaining in transactions, • building market-related assets

Entrepreneurs' Personal Values, Compensation, and Firm Performance

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ABSTRACT

According to the literature, firm performance is connected to an entrepreneur's values. We investigate this model, testing whether the entrepreneur's values may instead be related to the number of benefits offered, which would allow the entrepreneurs to attract and retain qualified workers. Using data from the top 500 fastest growing entrepreneurial firms in America for 2008, we discover that for these top-performing firms, the entrepreneur's values do not relate to the total number of benefits offered, meaning the mediation model does not exist and lending strength to the argument that entrepreneurs' values greatly influence the success of a new venture.

Entrepreneurs' Personal Values, Compensation, and Firm Performance

Introduction

There is a widely held belief that CEOs play a pivotal role in affecting organizational outcomes such as strategic choices and performance levels (Finkelstein & Hambrick, 1996; Hatton & Raymond, 1994; Hambrick & Mason, 1984). Thus, a considerable body of research has examined the individual characteristics of CEOs (e.g., personality, demographics, and functional expertise). However, these studies were not successful either in revealing a consistent relationship between individual characteristics and organizational outcomes or in providing theoretical reasons for the uniqueness of entrepreneurs. This is particularly true in entrepreneurial personality research that investigated a unique set of personality characteristics among entrepreneurs (e.g., Brockhaus & Horowitz, 1986; Shaver, 1995). As a result, some scholars (e.g., Berson, Org, & Dvir, 2008; Mitchell, Busenitz, Lant, McDougall, Morse, & Smith, 2002) recommended a shift from a trait approach to a cognitive approach to fill the gap in the entrepreneurship research domain. This argument is not new, but rather consistent with the seminal work of Hambrick and Mason (1984) that considered values and cognitive base as the main psychological characteristics of top managers.

The advantage of examining values is that they are deeply rooted and provide the reason for choice or behavior (Mele, 1995), providing criteria for judgment, preference, and choice (Williams, 1979). Hence, values play an integral role in human decision making (Meglino & Ravlin, 1998). In particular, entrepreneurs' values can be implanted into the organization's policies and processes affecting employees over many years, even after the founders' retirement, whereas entrepreneurs' personalities primarily influence their own behaviors and are less likely to be transmitted to their organization (Baron & Shane, 2007). Moreover, CEOs' values have been shown to influence their strategic choices and resultant firm performance (Carpenter, Geletkanycz, Sanders, 2004; Hambrick & Mason, 1984).

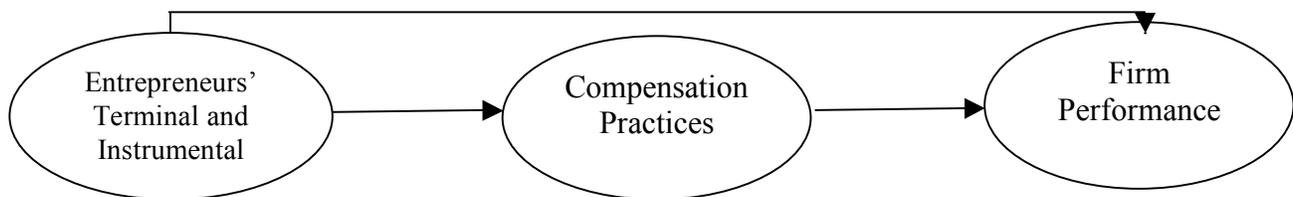
However, in comparison with the relationship between CEOs' values and organizational structure and strategies, little is known about the relationship between CEOs' values and firm performance. To our best knowledge, only two papers specifically examined CEOs' values and firm performance. Ling, Zhao, and Baron (2007) demonstrated the positive effects of founder-CEOs value of collectivism on new venture companies' post-start-up performance. Berson and colleagues (Berson et al., 2008) showed that CEO self-directive values were associated with innovation-oriented cultures and CEO benevolence values were related to supportive cultures. These cultural dimensions, in turn, were differentially associated with company sales growth. However, the two studies cannot explain why or how CEOs' values affect firm performance (e.g., Ling et al., 2007) because they did not examine mediating variables in the study or simply demonstrated correlations among variables (e.g., Berson et al., 2008). In addition, the range of values studied in their studies was very limited. Consequently, what set of executive values has an impact on firm performance and how values influence firm performances is not well-understood at present.

In the present study, we focus on the relationship between personal values of entrepreneurs and firm performance in the 500 fastest growing firms in America. Young entrepreneurial firms provide a favorable environment where organizational decision makers' values are more likely to be salient as opposed to large, mature firms. This is because entrepreneurs possess a great deal of discretion that can affect organizational processes and

outcomes (Chandler, 1977). Therefore, we argue that entrepreneur values (i.e., self-regarding values) are significantly related to firm performance. In addition, we expect the relationship between entrepreneur values and firm performance to be mediated by compensation practices the firm adopts. Entrepreneur values are critical in the formation of a firm's strategy (Fagenson, 1993) and are manifested in its priorities, resulting in organizational process and outcomes (Berson et al., 2008). Thus, we posit that entrepreneur values will be reflected in a number of the organizational decisions such as compensation practices by selecting or discarding certain options on the basis of values (Scott & Mitchell, 1972). Literature has shown that firm performance is partially determined by the degree to which compensation practices reinforce or match corporate strategies (Gomez-Mejia, 1992; Miles & Snow, 1984; Youndt, Snell, Dean, & Lepak 1996) because compensation is viewed as investment in human capital (Lado & Wilson, 1994; Lee & Miller, 1999). Human capital is particularly important in the context of entrepreneurial firms because the success of firms is likely to be determined by the quality of employees (Ireland, Hitt, & Sirmon, 2003; Snell & Dean, 1992; Shrader & Siegel, 2007). Further, entrepreneurs may be able to easily implant their values through compensation practices at the early organizational life cycle because the firm has less structure (Ferris, Arthur, Berkson, Kaplan, Harrell-Cook, & Frink, 1998) and the less competing interests between functions within the organization. This, in turn, results in the pronounced culture-HRM system linkage. Thus, a sample of entrepreneurial firms allows us to effectively capture the relationship between values, compensation practices, and firm performance.

In the next section, we elaborate a model of how entrepreneurs' values affect firm performance through compensation practices. Figure 1 contains this model. We begin by defining values and linking them to firm performance. Next, we theoretically connect entrepreneurs' values with compensation practices through the decision-making process by which priorities are set. Finally, we extend our argument to link entrepreneurs' values, compensation practices, and firm performance.

Figure 1: Proposed Model



Theoretical Background and Hypotheses

Entrepreneur values and firm performance

Values are defined as global beliefs about desirable end-states or modes of behavior that underlie attitudinal processes (Rokeach, 1973). Values function as principles and rules to help one select between alternatives and make decisions because they contain a judgmental element of what is right and wrong (Rokeach & Ball-Rokeach, 1989; Meglino & Ravlin, 1998). Previous research has shown that individuals' values are related to both individual and organizational outcomes by affecting individuals' perception, interpretation of their environments, and their behaviors (Agle, Mitchell, & Sonnenfeld, 1999). In particular, personal values have been recognized as the most influential leader characteristics (e.g. Hambrick & Mason, 1984; Lewin & Stephens, 1994; Miller & Droge, 1986). Ling et al. (2007) reported that firms headed by

founder-CEOs high in novelty value had average sales growth of 39%, which is 25% larger than the firms headed by those low in novelty. Altogether, this evidence supports the notion that firm performance can be viewed as “reflections of the values and cognitive bases of powerful actors in the organization” (Hambrick & Mason, 1984, p.193). Therefore, values are a key to understanding the relationship between entrepreneurs’ personal characteristics and firm performance.

Rokeach (1973) categorized the values he identified in two ways. First, he categorized the thirty-six values into two groups of eighteen: terminal values (values reflecting the idealized end goals of an individual) and instrumental values (values of the methods by which a person achieves their end goals). These two groups may be further separated into self-focused and other-focused values. Rokeach (1973) designated these groups for terminal values as self-centered values (i.e., intrapersonal such as salvation and a comfortable life) and society-centered values (i.e., interpersonal such as equality and a world at peace). For instrumental values, the split was into competence values (i.e., a personal focus which, when violated, arouse feelings of shame about personal inadequacy such as imaginative and logical) and moral values (i.e., an interpersonal focus, which when violated, arouses pangs of conscience or feelings of guilt such as honesty, responsible).

Based upon these distinctions, Hood (2003) found that moral and society-centered values tended to link the individual with society, such that leaders exhibiting these values were likely to foster ethical practices in the organization such as a formal ethics policy and company training programs on valuing diversity. In a sample of college students, Johnston (1995) reported that the terminal values including self-respect, happiness, social recognition, accomplishment, pleasure, a comfortable life, and an exciting life represented individualism while mature love, friendship, freedom, a world at peace, and national security represented collectivism. For instrumental values, imaginative, intellectual, logical, broadminded, courageous, ambitious, capable, and independent represented concern with the self, or an individual orientation while self-controlled, responsible, obedient, clean, helpful, polite, honest, cheerful, loving, and forgiving represented other-oriented or collective values. These distinctions by Johnston (1995) generally coincides with the conceptualization of collectivism and individualism by Hofstede (1980) and Triandis (1989) and self-interest versus other-regarding values by Agle et al. (1999) because it has consistently been shown to be valid and reliable in various studies (e.g., Fagenson, 1993; Feather, 1975; Rokeach, 1973; Rokeach & Ball-Rokeach, 1989).

Entrepreneurs are characterized as creative people with prevailing values for freedom, a sense of accomplishment, and self-respect (Chapman, 2000; Fagenson, 1993; Hemingway, 2005; Olson & Currie, 1992). Fagenson (1993) used the Rokeach Value System (RVS) (Rokeach, 1973) to study 115 entrepreneurs in small businesses and found that entrepreneurs tended to hold similar values that are vastly different from the personal values of ordinary managers. Specifically, entrepreneurs gave significantly greater importance than managers to the terminal values of self-respect, freedom, a sense of accomplishment, and an exciting life while managers gave greater importance than entrepreneurs to true friendship, wisdom, salvation and pleasure. The instrumental values were also found to vary by organizational position, such that entrepreneurs gave significantly greater importance than managers to being honest, ambitious, capable, independent, courageous, imaginative, and logical while managers gave greater importance than entrepreneurs to being loving, forgiving, helpful, and self-controlled. Brunson (1985) also found that presidents possessed predominantly moralistic-humanistic (e.g., world at

peace, equality, helpful, self-respect, and forgiving) values while their managers had pragmatic values (e.g., accomplishment, family security).

However, it is also true that entrepreneurs may differ in what they value (Kerr & Slocum, 2005). For example, Agle and colleagues (Agle et al., 1999) found that depending on which specific values the CEO has, the degree of salience a stakeholder assumes varied. In their study, CEOs' other-regarding values (e.g., helpful, equality, and loving) were positively related to their tendency to give employees priority and this, in turn, was positively related to the firm's corporate social performance. Consistent with this previous literature, we focus on two categories of values such as a world at peace, equality, freedom, national security, and family security among terminal values (henceforth other-caring terminal values) and forgiving, helpful, loving, and polite among instrumental values (henceforth other-caring instrumental values). The rationale for choosing these values is that they have been recognized as distinctive values that entrepreneurs hold (Fagenson, 1993) and have been consistently associated with concerns about others' well-being (e.g., Agle et al., 1999; Hood, 2003; Johnston, 1995; Rokeach, 1973).

Entrepreneurs have an image of a desired organizational state that can serve as a guide to strategies and decision (Srivastva, 1983). Values, by definition, refer to the desirable end-state or methods used to achieve that end-state (Rokeach, 1973). Furthermore, values are an integral facet of human decision making by setting priorities and criteria for judgment, preference, and choice that values impose (Williams, 1979). Thus, it is reasonable to posit that entrepreneurs' values may provide a basis for a number of the organizational decisions that they make. Based upon this rationale, we posit that entrepreneurs' other-caring terminal values and other-caring instrumental values will be positively associated with entrepreneurial firm performance by affecting a number of organizational decisions that entrepreneurs make.

Koys (1997) revealed that firms that placed strong emphasis on treating their employees fairly had the most favorable corporate reputations. Ling et al. (2007) demonstrated the positive influence of founder-CEOs value of collectivism on new venture companies' post-start-up performance. Hence, entrepreneurs' other-caring values may them lead to distribute firm resources based on organizational members' needs or a rule of equality. This will be done through a behavioral channeling mechanism by values should influence entrepreneurs to make organizational decisions in a manner congruent with their values (Ravlin & Mglino, 1987). Due to a paucity of literature that examined the link between a specific value and firm performance, we do not include hypotheses regarding the individual relationship between each value and firm performance. Rather, we hypothesize the relationships between entrepreneurs' other-caring terminal values and firm performance and instrumental values and firm performance, respectively, as following:

Hypothesis 1a: Entrepreneurs' other-caring terminal values (a world at peace, equality, freedom, national security, and family security) are significantly and positively related to the firms' performance (a growth in sales and in the number of employees).

Hypothesis 1b: Entrepreneurs' other-caring instrumental values (forgiving, helpful, loving, and polite) are significantly and positively related to the firms' performance (a growth in sales and the number of employees).

Entrepreneur values and compensation practices

Entrepreneurs differ in what they value; thus, they are likely to differ in what compensation practices they choose to offer their employees. Compensation practices "express and reinforce the values and norms that comprise corporate culture (Kerr & Slocum, 2005,

p.137)” and thus “communicate so much about an organization’s philosophy, values, and practices” (Rynes, 1987, p.190). Schein (1983) argued that corporate culture was the complex interaction between the assumptions and theories that founders bring to the firm and it is usually founders that play the initial role in establishing an organization’s culture (Ogbonna & Harris, 2001). Hence, entrepreneurs’ similar role as a founder provides them with a great deal of discretion within the firm. As a result, the firm’s compensation practices are likely to reflect the entrepreneurs’ values. As noted previously, this is done through the decision- making process by which values influence entrepreneurs to make congruent decisions with their values (Connor & Becker, 2003; Ravlin & Mglino, 1987; Rokeach, 1976; Williams, 1979).

Compensation practices that firms offer generally include bonuses, salary increases, promotions, stock options, and perquisites. However, of interest here is a variety of benefits (e.g., health insurance, vacation, etc.) and variable pay (e.g., stock options, etc.) that entrepreneurial firms provide their employees. Compensation is one of the primary HR practices firms use to elicit and reinforce desired behaviors from employees (Latham & Wexley, 1981). In this way, HR practices can symbolically communicate what the organization values to their employees (Rynes, 1987).

Another view of compensation practices is that they are “the least malleable features” (Rousseau & Greller, 1994, p.154) of the firm’s employment contract because benefits once available are difficult to take away or even change. When individuals join the firm, compensation packages offered are concretely detailed at the time so people tend to attribute their choice of firm to the benefits offered (Rousseau & Greller, 1994). Thus, compensation strategies are remarkably stable over time (Gerhart & Milkovich, 1990). On a related note, Baron and colleagues (Baron, Hannan, & Burton, 1999) found that founders’ initial model of employment relationship exhibited an enduring effect on the evolution of HR practices and policies. Specifically, in a sample of young technology start-up companies, founders who initially had a commitment-based employment relationship model in mind (i.e., family-like feeling, selection based on cultural fit, and informal control through peers or the organizational culture) provided employees with more social welfare. This finding suggests that entrepreneurs with these orientations are likely to rank high on other-caring values, which may lead them to provide their employees with generous compensation package. This is consistent with McClelland and Burnham’s (1976) argument that successful leaders care about the benefit of others or the organization by encouraging spirit, supporting employees, and rewarding their achievements.

Therefore, we posit that entrepreneurs’ other-caring values are positively related to the quantity of compensation that the firm offers to their employees because these values may lead entrepreneurs to distribute firm resources based on organizational members’ needs or a rule of equality. Due to this tendency, entrepreneurs high on other-caring values are likely to endorse compensation practices that offer generous compensation package through the decision making process that is congruent with their values.

Based upon preceding arguments, we hypothesize as following:

Hypothesis 2a: Entrepreneurs’ other-caring terminal values (a world at peace, equality, freedom, national security, and family security) are positively associated with the quantity of compensation practices that the firm offers.

Hypothesis 2b: Entrepreneurs’ other-caring instrumental values (forgiving, helpful, loving, and polite) are positively associated with the quantity of compensation practices that the firm offers.

Entrepreneur values, compensation practices, and firm performance

Previous research suggests that firm performance is best explained by the fit between values and strategic choices and firm performance (Berson et al., 2008; Ling et al., 2007). Firm performance depends on, in part, the degree to which compensation practices reinforce or match corporate strategies (Gomez-Mejia, 1992; Miles & Snow, 1984; Youndt et al., 1996). Moreover, founders' initial model of HR practices including compensation has far-reaching effects, influencing the likelihood of the firms' survival (Baron et al., 1996). Similarly, Welbourne and Andrews (1996) examined that HR decisions made early in the life cycle of a firm (i.e., the time of an initial public offerings, IPO) affected the firm's survival after five years. More specifically, they found that companies having compensation programs such as stock options and profit sharing at the time of IPO were more likely to survive. This was likely because those compensation practices provided employees with a longer-term perspective on the business, which helped to retain employees and make them work towards a common goal. As a result, the firm was able to keep moving forward even while adjusting to changes in their environment (Welbourne & Andrews, 1996). Finally, the compensation practices of an early stage of a firm positively affect not only relatively short-term success (e.g., five years after IPO) but also the long-term survival of the firm (e.g., fifty years, Collins & Porras, 1994).

For a successful strategy implementation, firms should not only have employees who are equipped with skills, knowledge, and abilities that provide economic value to firms but also motivate their employees to use them (MacDuffie, 1995). Human capital is likely the most critical resource for entrepreneurial firms because of their heavy dependency on employee skills and commitment in creating the value (Ireland et al., 2003; Snell & Dean, 1992). This is where compensation practices play an important role. Compensation practices elicit and reinforce desired attitudes and behaviors from employees consonant with the firm's chosen strategy (Wright & McMahan, 1992). Employees exchange their effort and loyalty for tangible benefits (March & Simon, 1958). Hence, when employees feel that the firm values their contributions and cares about their well-being by perceiving generous compensation packages that the firm offers, they will be likely motivated to reciprocate with the firm by engaging in both role-specific and extra-role behaviors which lead to better firm performance (Koys, 2001). This argument has supported by empirical evidence that HR practices that signal investments in human capital should reduce organizational turnover (Allen, Shore, & Griffeth, 2003) thus higher compensation levels are negatively related to turnover (Shaw, Delery, Jenkins, & Gupta, 1998), resulting in better firm performance (Shaw, Duffy, Johnson, & Lockhart, 2005).

In addition to positive impact on employee retention and motivation, competitive compensation packages can help firms to establish good reputation for prospective employees by affecting job applicants' perception of organizational attractiveness (Cable & Judge, 1994). Positive reputation among potential employees may strengthen a firm's ability to attract and select better job applicants. Thus, through recruiting and retaining outstanding people, firms can also generate human capital advantage (Boxall, 1996).

Taken together, value theory suggests that values are acquired and hierarchically organized to become part of a relatively enduring beliefs, providing an individual with principles and rules for decision-making (Connor & Becker, 2003; Rokeach, 1976). Entrepreneurs' personal values are reflected in the firm's compensation practices that fit with firm strategy and organizational culture (Kerr & Slocum, 2005; Schein, 1983) through setting priorities in organizational decision making processes (Ravlin & Mglino, 1987; Williams, 1979). Further,

entrepreneurs' personal values are connected with firm performance (Berson et al., 2008; Hambrick, 2007). Finally, generous compensation packages may result in greater employees' commitment to the organization (Levine, 1993) and a felt obligation to reciprocate with the organization (Rhoades & Eisenberger, 2001). Therefore, we argue that entrepreneurs' personal values, transferred to the firm's compensation system, will be related to the firm's performance, such that entrepreneurs who have certain specific values would not sanction compensation practices that may not agree with what their values prefer and guide.

Specifically, CEO's other-caring values (e.g., equality) were positively related to the firm's corporate social performance through giving employee group priority (Agle et al., 1990). Fairness or justice is one of values that have been considered particularly critical to the cultures of effective organizations and thus to the shaping of HR practices (e.g., Koys, 1997; Ulrich & LaFasto, 1995). This allows us to posit that entrepreneurs high on other-caring values are likely to allocate firm resources based on a rule of fairness or equality. Therefore, it is predicted that an entrepreneur who places low importance on other-regarding values is not likely to approve compensation packages beyond the bare minimum because endorsement of these packages means that employees are not interchangeable and imposes additional significant costs to the firm.

Additionally, entrepreneurs may want to actively utilize compensation practices as a strategic choice to achieve the firm's performance goals by offering generous compensation package that attract, retain, and motivate employees. Literature has shown that firm performance depends on, in part, the degree to which compensation practices reinforce or match corporate strategies (Gomez-Mejia, 1992; Miles & Snow, 1984; Youndt et al., 1996). Thus, competitive advantages can be achieved through human resources in light of a firm's strategies (Delery, 1998; Lengnick-Hall & Lengnick-Hall, 1988; Wright & Snell, 1998) and the match between human resource capabilities and strategy is positively related to firm performance (Wright, Smart, & McMahan, 1995).

Based upon the preceding argument, therefore, we predict that entrepreneurs' personal values partially affect the firms' performance through compensation practices that the firm offers their employees.

Hypothesis 3a: Firms' compensation practices partially mediate the relationship between entrepreneurs' other-caring terminal values (a world at peace, equality, freedom, national security, and family security) and the firm's performance.

Hypothesis 3b: Firms' compensation practices partially mediate the relationship between entrepreneurs' other-caring instrumental values (forgiving, helpful, loving, and polite) and the firm's performance.

These hypotheses imply a partial mediation model (Figure 1) in which entrepreneurs' values are related to firm's performance via the mediator of compensation practices that the firm adopts.

Methods

Sample and Procedures

This study draws from two data sets: one containing data on entrepreneur values and the other containing data on compensation practices and firm performance. To gather data for compensation practices and firm performance, we partnered with *Entrepreneur Magazine*, using their in-house expertise for gathering performance data and other relevant internal information

for each of the 500 fastest growing firms in the United States. *Entrepreneur Magazine* calculated the ranking for each firm based on a combination of factors, including the percent sales growth, growth in number of employees, and other considerations. In order for *Entrepreneur Magazine* to consider a business one of the fastest growing entrepreneurial firms in the United States for 2007, a business had to be started between 1998 and 2001.

We chose to study entrepreneurs of top performing firms for two reasons. First, we believe that the top 500 entrepreneurial firms would likely provide better compensation packages for their employees than other firms, thereby allowing us more chances to find the significant relationship among entrepreneur values, compensation practices, and firm performance. If the relationships are not captured in the sample of successful entrepreneurial firm, it would be much less likely for us to expect to see those relationships in less successful firms with slow growth. Second, no study has explored the values of high growth entrepreneurial ventures, firms who are unarguably leaders in their field. This study presents an opportunity to begin exploring the founders of these businesses and provides a baseline against which comparisons of entrepreneurs with average or low performing start-ups may be compared.

Compensation data was obtained through direct contact with the firms, while performance data were gathered from publicly available records. Upon receipt of the data, we pulled a subset of the 500 firms and verified the accuracy of the information to ensure the validity of the data. Using this database, value surveys were sent to the 933 founders of the 500 fastest growing firms in the United States. We received 134 responses (14.1%), of which 17 were not usable due to incomplete data. However, these responses represent 111 unique firms of the top 500 (22.2%). Each value survey response was paired with compensation practice and performance data supplied by *Entrepreneur Magazine* to create a master dataset.

Entrepreneur values

In order to assess entrepreneur values, we selected the Rokeach Value System (RVS) (Rokeach, 1973) because RVS is a well-established, frequently used personal value measurement instrument in various disciplines, including the management field (Fagenson, 1993, Feather, 1975; Rokeach & Ball-Rokeach, 1989). For this study, entrepreneurs were asked to assess the importance of each terminal and instrumental value on a scale from 1-5, with 1 being extremely important and 5 being not very important. Each survey presented the 36 values with brief clarifying examples next to them. Example items were: “A comfortable life (a prosperous life)”, “Ambitious (hard working, aspiring).” Note that terminal values and instrumental values were shown to be weakly correlated with each other (Rokeach, 1973), thus it seems reasonable for us to treat them independently. For the analysis of the other-focused terminal values, responses to the five terminal values were averaged together to create a composite other-focused terminal value measure for each entrepreneur. We repeated this process with the four other-focused instrumental values. The Cronbach’s α for other-caring terminal values and other-caring instrumental value were .81 and .79, respectively, which is higher than .70 (Brunson, 1985) and gives credence to combination of the values.

Compensation practices

Data on compensation practices from *Entrepreneur Magazine* included health insurance, life insurance, retirement plans, stock options, company car, tuition reimbursement, telecommuting, and flextime and they were coded as a dichotomous variable (0=not present, 1=present). In addition, companies were allowed to mention any other benefits they offered.

Following the procedures outlined by Delery and Doty (1996), we created the compensation practice index by simply adding the number of benefits and perks offered by the company. This additive approach is appropriate because aggregating compensation practices assumes that firms can improve performance by increasing the number of practices (Youndt et al., 1996). Therefore, more benefits offered is theoretically better with respect to the impact on performance because of the overlapping and mutually reinforcing effect of multiple practices (MacDuffie, 1995). Note that the additive approach may weaken the net effect of the compensation practices in the absence of a practice (MacDuffie, 1995) while a multiplicative approach reduces the index value to zero if a single compensation practice is absent. Furthermore, as there is no evidence regarding a differential impact of various compensation packages on firm performance, we assigned equal weighting to each practice. Thus, we assumed the absence or presence of any particular compensation would have a same effect on firm performance. When looking at the individual practices, no significant correlations resulted.

Firm Performance

For evaluating firm performance, a firm's growth in sales and the number of employees were used. Given that the sales growth for all the companies was millions of dollars, we first transformed the sales data into a more usable form by using the natural logarithm of the sales data. For the sales growth, we then calculated the percent increase in sales from 2002 to 2006. This methodology is consistent with the literature (e.g., Batt, 2002). Sales growth has been used as a primary outcome variable in numerous studies of small business (e.g. Carlson, Upton, & Seaman, 2006; Covin, Green, & Slevin, 2006). We performed a similar transformation using natural logarithms on the employment figures, which is also consistent with the literature (Kimberly, 1976). To calculate the employment growth, we used the natural logarithm of the actual growth. The reason for the difference from the sales data is that the sales figures, even transformed, covered a wide range of values, which would distort the effect size of all the independent variables. For employee growth, however, only four firms exceeded 250 total employees. As such, using the natural logarithms allowed us to use the transformed data rather than calculate a percent increase.

Control variables

We controlled for firms' size as evidence suggests that larger firms are more likely to use more compensation practices (Jackson & Schuler, 1995) than small firms. Firm size was measured as the natural logarithmic transformation of the number of full-time employees (Kimberly, 1976). We also included sales and the number of employees for each firm in 2002, the beginning of the measured performance period. Due to the large variance in the values for each of these variables, we used their natural logarithms. These two variables control for the firms' starting size. In addition, we included whether the firm was founded as a partnership or as a venture owned by only one person. We believed that starting a business with other people might indicate a proclivity toward other-focused behavior, and we wished to control for any such impact on the mediation model.

For the entrepreneurs, we drew on three pieces of information as control variables: the gender, age, and the number of businesses previously started by the entrepreneur. All information was as of December 2007. The literature suggests that gender and age are associated with personal values (Fagenson, 1993; Rokeach, 1973). Also, the number of previous start-ups allows us to account for accumulated venture experience by entrepreneurs.

Statistical Analyses

We used regression analysis for each of the hypothesis tests. We followed Baron and Kenney’s (1986) technique for determining the presence of a mediation effect. This technique requires the examination of three models: (1) the relationship between entrepreneur values and firm performance (H1a and H1b), (2) the relationship between entrepreneur values and compensation practices (H2a and H2b), and (3) the relationship between entrepreneur values and firm performance while controlling for the number of benefits (H3a and H3b). Thus, we first regressed the other-focused terminal and instrumental composite values against the growth in sales and growth in employment.

Results

Table 1 presents the summary statistics for the data.

Table 1: Means, Standard Deviations, and Correlations of Study Variables

	Mean	SD	1	2	3	4	5	6	7	8	9	10
1 Gender	0.12	0.33										
2 Age	47.43	8.99	-0.08									
3 Number businesses started	3.05	4.06	-0.09	0.14								
4 Partners	0.65	0.48	0.03	-0.07	-0.15							
5 Other-Focused Terminal Values	1.82	0.70	-0.10	0.06	-0.08	-0.02						
6 Other-Focused Institutional Values	2.13	0.71	-0.01	0.10	-0.08	-0.10	0.64					
7 Ln Sales 2002	14.55	1.34	-0.08	0.07	0.18	-0.04	-0.12	-0.16				
8 Ln Sales Growth 2002-2006	1.65	1.16	0.09	-0.07	-0.13	0.07	0.04	0.19	-0.72			
9 Ln Number of Employees 2002	2.38	1.06	-0.09	0.06	0.08	0.05	-0.05	-0.09	0.56	-0.27		
10 Ln Employment Growth 2002-2006	3.36	1.20	-0.04	-0.05	0.02	0.03	-0.06	0.00	0.14	0.25	0.66	
11 Total Benefits	4.46	2.03	0.08	-0.18	-0.10	0.27	-0.05	-0.05	-0.01	0.19	0.27	0.39

Note: Gender: 0 = male, 1 = female; Partners: 0 = Started the business solo, 1 = Started the business with partners

Following Barron and Kenny’s methodology (1986), we first regressed the other-focused terminal and instrumental composite values against the growth in sales and growth in employment. Table 2 summarizes the results of other-focused terminal on the sales growth and employment growth.

Table 2: Other-Focused Values on Performance Growth

	Percent Sales Growth (natural log) Model 1	Employee Growth (natural log) Model 2	Total Number of Benefits Offered Model 3
Constant	11.101 (0.000)	5.730 (0.000)	7.539 (0.001)
Gender	0.117 (0.636)	-0.005 (0.984)	0.280 (0.599)
Age of the entrepreneur	-0.003 (0.718)	-0.007 (0.436)	-0.038* (0.043)
Number of businesses previously started	0.001 (0.944)	0.003 (0.890)	-0.026 (0.520)
Current business started with partners	0.117 (0.477)	-0.022 (0.897)	0.878* (0.015)
Natural log of 2002 sales	-0.679* (0.000)	-0.279* (0.000)	-0.238 (0.111)
Natural log of number of employees in 2002	0.176* (0.049)	0.935* (0.000)	0.774* (0.000)
Other-focused terminal values	-0.327* (0.031)	-0.318* (0.040)	0.228 (0.462)
Other-focused instrumental values	0.308* (0.033)	0.161 (0.272)	-0.339 (0.295)
r ²	0.559	0.513	0.223
adj. r ²	0.526	0.477	0.166

*Significant at the $p < 0.05$ level

The results of the regressions refute hypothesis H1a, that the other-focused terminal values are positively correlated with the performance of the firm, both with regards to sales growth and employee growth. Both results are negative, indicating that an entrepreneur who values the welfare of others as an ideal end state actually performs worse than those focusing more on their personal welfare.

The results for H1b, correlating the instrumental values with firm performance, on the other hand, are mixed. The other-focused instrumental value composite had a significant positive correlation with sales growth. However, the effect on employee growth, although positive, was not significant.

Only two other variables showed significance: the sales and the number of employees in 2002. Both of these variables were significant in both regressions, although the effect size of the number of employees with respect to the sales growth is relatively small. The strong negative correlation the initial sales of the firm has in both regressions was anticipated as comparable growths in firms will result in different percent changes depending upon the starting volume of

sales. For example, a \$1 million increase for a firm starting with \$100,000 would yield 1,000% increase versus one starting with \$1 million in sales would only be 100%.

Our second set of hypotheses, H2a and H2b, begin the creation of the mediational path that could explain the correlation between other-focused values and performance. As such, we regressed the composite variables on the total number of benefits offered. The results of this analysis are captured in Table 2.

Both H2a and H2b are not supported by the data. Thus, the mediational pathway does not exist. Without the key relationship between other-focused values and the number of benefits offered, we can conclude that the organizational culture is limitedly influenced by the entrepreneur's values. In addition, H3a and H3b are not relevant. Without the mediational path, significant results between the total number of benefits and the performance of the firm can only indicate the need for inclusion of an additional independent variable, a topic we hope to explore further in future papers.

In addition to this finding, several of the control variables show significant correlations. The age of the entrepreneur, whether the firm had multiple founders, and the numbers of employees in 2002 all have direct effects on the number of benefits offered. All three of these variables have limited explanatory power, as demonstrated by the low r^2 value for the model, which may be explained by the limited range of values for each variable.

Discussion

While several of our hypotheses were validated by the regression analysis, one key path was missing: the connection between values and the total number of benefits offered. After carefully considering the data, we have determined several possible reasons that may hide a direct connection. The first is salary data for the employees of each firm. Our theory is that other-focused entrepreneurs desire to help their employees; however, we found no literature stating whether such help was through benefits or through salary increases. One possibility is that, were we able to control for employee salary as well as total benefits offered, we would find a significant relationship emerge. Connected to salary data is measuring the actual extent of compensation of each benefit for the employees. Simply looking at each benefit in a binary state—either present or absent—fails to capture the true extent of the influence of benefits. However, measuring the extent of benefits is difficult at best; while some benefits can be monetized like the amount of health insurance an employer offers, others defy such categorization (i.e., pet-friendly environment, etc.). Still, a closer approximation of the value or extent of the benefits is more likely to reveal their connection with values.

Two other considerations may play a factor in the non-significant path. The first is that the survey tool used to measure values is susceptible to the social desirability of the values. We did not require the entrepreneurs to force-rank each terminal and instrumental value. Instead, the survey asked entrepreneurs to evaluate each value using a 5-point Likert scale. The end result is that values are all viewed as being socially good; all people value freedom, politeness, and the other values, meaning their scores are biased upwards. This in and of itself is not a problem, as the regression analysis accommodates such trends in data. The issue arises, though, that the data may have less variance than expected, resulting in less explanatory in the model. However, the consistency of this issue across both the terminal and instrumental values means that this may be an issue among top-performing entrepreneurs more than an issue with the data collection method, which links to the final possibility for why the mediational path failed to appear as significant.

As mentioned earlier in this paper, top-performing entrepreneurs have rarely been studied. As such, little is known about their value profiles. These entrepreneurs may, in fact, have incredibly similar mentalities that lead to their success. Alternatively, these top-performing entrepreneurs may have a different approach to handling benefits from more typical entrepreneurs, meaning that our results are not generalizable to all entrepreneurs. In fact, top-performing entrepreneurs may be markedly different than their less successful counterparts, meaning this same study may show a definite path between values and total benefits offered if conducted with a sample not including the top 500 entrepreneurs in the United States.

In addition to possible areas of research to explore the missing mediational path, our model offers several other topics for future exploration. For example, in the first regressions, we did not anticipate the positive correlation of the number of employees in 2002 on the sales growth of the firm. We had anticipated that the larger number of employees would indicate a more mature firm, meaning that the firm would be less likely to grow as rapidly as its counterparts. However, what a larger employee base could indicate is preparation for an expected increase in sales, thereby allowing those firms to better capitalize on growth opportunities. Such an explanation would also help with interpreting the positive correlation with the employee growth – firms with more employees needed to increase their employment pool even more as they not only rapidly developed their business, but also prepared for the next phase of growth.

A possible counterargument is that the larger number of employees could indicate a more developed firm, but the sample population prevents such an argument from being valid. All of the firms were started between 1998 and 2001 and furthermore were in a high growth stage. These two stringent criteria ensured that all the firms were still in their start-up phases upon the initial measures in 2002.

The other notable result from the initial regressions is that the number of businesses previously started by the founder had no significant impact on the performance of the firm. What this indicates is that highly successful firms may be founded by entrepreneurs of all levels of experience. Unfortunately our data did not include the performance of the other ventures these entrepreneurs founded to see if these firms are outliers for serial entrepreneurs, or if such entrepreneurs were building increasingly successful ventures prior to the ones in this study.

In the regression of other-focused values on the number of benefits offered, we again encountered several interesting results. One of the first is that older entrepreneurs were found to offer fewer benefits than their counterparts. This may be due to several possibilities. The first is that older entrepreneurs worked during times when firms offered fewer benefits and perks, both in variety and total number, which may influence their current perspective on how many to offer. Such a perspective may be a generational difference; younger American entrepreneurs may be reflecting the growing focus on work-life balance, resulting in their granting greater number of benefits to compensate for the time lost from leisure activities and family. Due to the limited sample size, we were not able to explore generational differences with regards to benefits in greater depth. However, such an exploration could be very beneficial for understanding and predicting fundamental changes in American entrepreneurial ventures, especially for high-performing firms.

Three other possibilities may also explain this result. The second possibility is that older entrepreneurs have had more time to study other successful businesses, and their informal studies have indicated that firms can be successful without offering a plethora of benefits. The third possibility is that older entrepreneurs better understand how to attract and retain quality

employees without resorting to benefits. Alternatives not measured in our data include offering higher wages or expending extra effort to connect with the employees on a personal level to maintain strong loyalty and morale.

Another result of note is that entrepreneurs who started their firms with other people offer almost one additional benefit on average to their employees. This finding conforms with our hypotheses that being other-focused would lead to an increased concern in the well-being of employees, leading to offering additional benefits. Starting a business with partners forces an entrepreneur to consider how best to work with others from the beginning, meaning the entrepreneur is forced to be more other-focused than an entrepreneur who founds a business by him- or herself.

One additional finding is that the number of employees a firm had in 2002 was positively correlated with the number of benefits offered. We hypothesize that this effect may be due to the ability of the entrepreneur to connect on a personal level with his or her employees. Presumably, in larger firms, employees may not feel quite as connected to the firm and likely have much less time with the entrepreneur. Since the measure of the benefits was as of 2007, firms that started large most often continued to grow, even further reducing the ability of the entrepreneur to build loyalty through direct communication and interaction. To compensate for this lack of attention, the entrepreneurs may have needed to offer more benefits than an equally successful but smaller firm to ensure that the firm retains the skilled employees it had and attract new employees of comparable quality.

Implications

Aside from the results for further exploration discussed above, this paper offers two key considerations for the field of entrepreneurship. The first relates to the sample studied. Never before have so many highly successful entrepreneurs been studied. These entrepreneurs are truly the *crème de la crème* of American small business founders, and as such, studying their characteristics and approaches to business development may offer insights that may point to the direction all firms will eventually develop. These entrepreneurs and their firms are the leaders of their respective fields, and many other entrepreneurs and established firms will likely study and replicate their behaviors in an effort to mimic their success. Furthermore, these firms cover many fields, meaning that our sample may be reflective of trends among entrepreneurs overall.

The second point of interest for the field of entrepreneurship is the discovery of the impact of other-focused values on firm performance. We found that entrepreneurs who have other-focused instrumental values enjoy greater success than their more selfish counterparts, reinforcing two key concepts. First, customer service, that is, attention to others in a position to purchase one's products or services, is essential to success. Second, attention to one's employees is also critical, as the success of a venture derives not from the entrepreneur as a solitary worker, but rather as the leader of a team. Unfortunately, our data in this study did not allow us to separate these effects to determine which proportion of the overall effect may be attributed to each. We hope in future studies to explore this difference.

On the other hand, being other-focused in long-term goals can actually hinder the growth of the business. We found that entrepreneurs who ranked other-focused terminal values as important had lower performance improvement over the four years captured in our study. Apparently, some amount of selfish desire is essential to achieving the highest level of performance. Combined with the previous finding, the ideal entrepreneur is someone whose goals focus on personal satisfaction and success and realizes that the best chance to achieve those

goals is through working cooperatively with others. To what extent the entrepreneur needs to be committed to these two attitudes is an area for potential further research.

Limitations and Future Research

While this study has explored new areas by studying an elite group of entrepreneurs, we acknowledge that this fact does not mean we should not seek to improve our future research in this area. In particular, we found that our tool for measuring other-focused values was limited. While we recognize that entrepreneurs are not likely to complete lengthy questionnaires, we would like to design our next survey to explore each of the values in greater depth, allowing us to more closely examine each value and creating a more thorough composite variable for other-focused values. In addition, based on the results of this study, we propose including questions to help differentiate between other-focused behavior directed at customers and clients, employees, and family and friends. With such differentiation, we hope to capture the range of other-focused behavior that optimizes firm performance.

Another area for improvement is the response rate. Although we had representation from 23.5% of all businesses still in existence at the time of our survey (several having been sold), only 117 (12.3%) of all 951 originally eligible entrepreneurs responded with enough data for analysis, not counting 17 more who responded with incomplete data. This limited response rate is partially due to the delay in sending out the surveys; although the top 500 firms were officially recognized in January 2008, the first round of the surveys were sent in July due to logistical concerns. When we next conduct the survey, we intend to send the surveys much earlier. In addition, we will look at the survey design to ensure that the length of the survey is not so long that entrepreneurs are disinclined to answer the questions.

Third, our statistic for measuring the benefits offered was quite limited. Due to the data we were able to gather from each firm, the only information we had was the presence or lack of any given benefit. However, we did not have the degree to which any of these benefits were offered. Neither did we have information on other forms of compensation, including wages, mentoring programs, training resources, or quality facilities and resources for employees to use at work. As such, the hypothesized effect may actually exist, but requires more detailed data to allow examination of the effect.

Another point of consideration for future research is that the sample for this study comprised the top performing entrepreneurs in the country. These entrepreneurs may differ in the way they use benefits. Subsequent research should explore two topics. The first is how the theorized model applies to the typical entrepreneur across a wide range of disciplines. The second is to examine top performing entrepreneurs across several years. Both approaches may uncover trends not otherwise visible in this dataset.

References

- Agle, B. R., Mitchell, R. K., & Sonnenfeld, J. (1999). Who matters to CEOs? An investigation of stakeholder attributes and salience, corporate performance, and CEO values. *Academy of Management Journal*, 42, 507–525.
- Allen, D. G., Shore, L. M., & Griffeth, R. W. (2003). The Role of Perceived Organizational Support and Supportive Human Resource Practices in the Turnover Process. *Journal of Management*, 29, 99-118.

- Baron, J. N., Hannan, M. T., & Burton, M. D. (1999). Building the iron cage: Determinants of managerial intensity in the early years of organizations. *American Sociological Review*, *64*, 527-547.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173-1182.
- Baron, R. A., & Shane, S. (2007). *Entrepreneurship: A process perspective (2nd ed.)*. Cincinnati, OH: Thomson-Southwestern.
- Batt, R. (2002). Managing customer services: Human resource practices, quit rates, and sales growth. *Academy of Management Journal*, *45*, 587-597.
- Berson, Y., Oreg, S., & Dvir, T. (2008). CEO values, organizational culture and firm outcomes. *Journal of Organizational Behavior*, *29*, 615-633.
- Boxall, P. (1996). The strategic HRM debate and the resource based view of the firm. *Human Resource Management Journal*, *6*, 59-75.
- Brockhaus, R. H. S., & Horowitz, P. S. (1986). The Art and Science of Entrepreneurship. In D. S. R. Smilor (Ed.), *The psychology of the entrepreneur* (pp. 25-48). Cambridge, MA: Ballinger.
- Brunson, R. W. (1985). A Top Management Personal Values Typology: Inverted Factor Analysis Approach to a Conglomerate. *Group & Organization Studies*, *10*, 118-134.
- Cable, D. M., & Judge, T. A. (1994). Pay preference and job search decisions: A person-organization fit perspective. *Personnel Psychology*, *47*, 317-348.
- Carlson, D. S., Upton, N., & Seaman, S. (2006). The Impact of Human Resource Practices and Compensation Design on Performance: An Analysis of Family-Owned SMEs. *Journal of Small Business Management*, *44*, 531-543.
- Carpenter, M. A., Geletkanycz, M. A., & Sanders, W. G. (2004). Upper echelons research revisited: Antecedents, elements, and consequences of top management team composition. *Journal of Management*, *30*, 749-778.
- Chandler, A. D. (1977). *The Visible Hand*. Cambridge, MA: BelKnap Press.
- Chapman, M. (2000). When the entrepreneur sneezes, the organization catches a cold: A practitioner's perspective on the state of the art in research on the entrepreneurial personality and the entrepreneurial process. *European Journal of Work and Organizational Psychology*, *9*, 97 – 101.
- Collins, J. C., & Porras, J. I. (1994). *Built to last: Successful habits of visionary companies*. New York: Harper Business.
- Connor, P. E., & Becker, B. W. (2003). Personal value systems and decision-making styles of public managers. *Public Personnel Management*, *32*, 155-180.
- Covin, J.G., Green, K.M., & Slevin, D.P. (2006). Strategic process effects on the entrepreneurial orientation-sales growth rate relationship. *Entrepreneurship Theory & Practice*, *30*, 57-81.
- Delery, J. (1998). Issues of fit in strategic human resource management: Implications for research. *Human Resource Management Review*, *8*(3), 289-309.
- Delery, J., & Doty, D. H. (1996). Modes of theorizing in strategic human resource management: Tests of universalistic, contingency, and configurational performance predictions. *Academy of Management Journal*, *39*, 802-835.
- Fagenson, E. A. (1993). Personal value systems of men and women entrepreneurs versus managers. *Journal of Business Venturing*, *8*, 409-431
- Feather, N. T. (1988). The meaning and importance of values: Research with the Rokeach value survey. *Australian Journal of Psychology*, *40*, 377-390.

- Ferris, G. R., Arthur, M. M., Berkson, H. M., Kaplan, D. M., Harrel-Cook, G., & Fink, G. (1998). Toward a social context theory of the human resource management-organizational effectiveness relationship. *Human Resource Management Review*, 8, 235-264.
- Finkelstein, S., & Hambrick, D. C. (1996). *Strategic leadership: Top executives and their effects on organizations*. Los Angeles: West.
- Gerhart, B., & Milkovich, G. (1990). Organizational differences in managerial compensation and financial performance. *Academy of Management Journal*, 33, 663-691.
- Gomez-Mejia, L. R. (1992). Structure and process of diversification, compensation strategy, and firm performance. *Strategic Management Journal*, 13, 381-397.
- Hambrick, D. C. (2007). Upper echelons theory - An update. *Academy of Management Review*, 32, 334-343.
- Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9, 93-206.
- Hatton, L., & Raymond, B. (1994). Developing Small Business Effectiveness in the Context of Congruence. *Journal of Small Business Management*, 32, 77-94.
- Hemingway, C. A. (2005). Personal values as a catalyst for corporate social entrepreneurship. *Journal of Business Ethics*, 60, 233-249.
- Hofstede, G. (1980). *Culture's consequences*. Beverly Hills, CA: Sage.
- Hood, J. N. (2003). The relationship of leadership style and CEO values to ethical practices in organizations. *Journal of Business Ethics* 43, 263-273.
- Ireland, R. D., Hitt, M. A., & Sirmon, D. G. (2003). A model of strategic entrepreneurship: The construct and its dimensions. *Journal of Management*, 29, 963-989.
- Jackson, S. E., & Schuler, R. S. (1995). Understanding human resource management in the context of organizations and their environments. *Annual Review of Psychology*, 46, 237-264.
- Johnston, C. S. (1995). The Rokeach Value Survey: Underlying structure and multidimensional scaling. *The Journal of Psychology*, 129, 583-597.
- Kerr, J., & Slocum, J. J. W. (1987). Managing corporate culture through reward systems. *Academy of Management Executive*, 1, 99-107.
- Kimberly, J. R. (1976). Organizational size and the structuralist perspective: A review, critique, and proposal. *Administrative Science Quarterly*, 21, 571-597.
- Koys, D. J. (1997). Human Resource Management and Fortune's Corporate Reputation Survey. *Employee Responsibilities and Rights Journal*, 10, 93-101.
- Koys, D. J. (2001). The effects of employee satisfaction, organizational citizenship behavior, and turnover on organizational effectiveness: A unit-level, longitudinal study. *Personnel Psychology*, 54, 101-114.
- Lado, A. A., & Wilson, M. C. (1994). Human resource systems and sustained competitive advantage: A competency-based perspective. *Academy of Management Review*, 19, 699-727.
- Latham, G. P., & Wexley, K. N. (1981). *Increasing productivity through performance appraisal*. Reading, MA: Addison-Wesley.
- Lee, J., & Miller, D. (1999.). People matter: Commitment to employees, strategy and performance in Korean firms. *Strategic Management Journal*, 20, 579-593.
- Lengnick-Hall, C. A., & Lengnick-Hall, M. L. (1988). Strategic human resource management: A review of the literature and a proposed typology. *Academy of Management Review*, 13, 454-470.
- Levine, D. I. (1993). Worth waiting for? Delayed compensation, training, and turnover in the United States and Japan. *Journal of Labor Economics*, 11, 724-752.

- Lewin, A. Y., & Stephens, C. U. (1993). Designing postindustrial organizations: Combining theory and practice In G. P. Huber & W. H. Glick (Eds.), *Organizational Change and Redesign* (pp. 393-409). New York: Oxford University Press.
- Ling, Y., Zhao, H., & Baron, R. A. (2007). Influence of Founder-CEOs' Personal Values on Firm Performance: Moderating Effects of Firm Age and Size. *Journal of Management*, *33*, 673-696.
- March, J. C., & Simon, H. A. (1958). *Organizations*. New York: Wiley.
- McClelland, D. C., & Burnham, D. H. (1976). Power is the great motivator. *Harvard Business Review*, *54*, 100-110.
- MacDuffie, J. P. (1995). Human resource bundles and manufacturing performance: Organizational logic and flexible production systems in the world auto industry. *Industrial and Labor Relations Review*, *48*, 197-221.
- Meglino, B. M., & Ravlin, E. C. (1998). Individual values in organizations: Concepts, controversies, and research. *Journal of Management*, *24*, 351-389.
- Mele, A. R. (1995). *Autonomous Agents: From self-control to autonomy*. New York Oxford University Press.
- Miles, R. E., & Snow, C. C. (1984). Designing strategic human resource system. *Organizational Dynamics*, 36-52.
- Miller, D., & Droge, C. (1986). Psychological and traditional determinants of structure. *Administrative Science Quarterly*, *31*, 539-560.
- Mitchell, R. K., Busenitz, L., Lant, T., McDougall, P. P., Morse, E. A., & Smith, J. B. (2002). Toward a theory of entrepreneurial cognition: Rethinking the people side of entrepreneurship research. *Entrepreneurship Theory and Practice*, *27*, 93-104.
- Ogbonna, E., & Harris, L. C. (2001). The founder's legacy: Hangover or inheritance? *British Journal of Management*, *12*, 13-31.
- Olson, S. F., & Currie, H. M. (1992). Female entrepreneurs: Personal value systems and business strategies in a male-dominated industry. *Journal of Small Business Management*, *30*, 49- 57.
- Ravlin, E. C., & Meglino, B. M. (1987). Effect of values on perception and decision making: A study of alternative work values measures. *Journal of Applied Psychology*, *72*, 666-673.
- Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: A review of the literature. *Journal of Applied Psychology*, *87*, 698-714.
- Rokeach, M. (1973). *The nature of human values*. New York: Free Press.
- Rokeach, M., & Ball-Rokeach, S. J. (1989). Stability and change in American values, 1969-1981. *American Psychologist*, *44*, 775-784.
- Rousseau, D. M., & Greller, M.M. (1994). Human Resource Practices: Administrative Contract Makers. *Human Resource Management*, *33*, 385– 401.
- Rynes, S. L. (1987). Compensation strategies in recruitment. *Topics in Total Compensation*, *2*, 185-196.
- Schein, E. H. (1983). The Role of the Founder in Creating Organizational Culture. *Organizational Dynamics*, *12*,13-28.
- Scott, W. G., & Mitchell, T. R. (1972). *Organization theory : A structural and behavioral analysis*. Homewood, Illinois: Richard D. Irwin.
- Shaw, J. D., Delery, J. E., Jenkins, G.D., & Gupta, N. (1996). An organization-level analysis of voluntary and involuntary turnover. *Academy of Management Journal*, *41*, 511-525.
- Shaw, J. D., Duffy, M., Johnson, J., & Lockhart, D. (2005). Turnover, social capital losses and performance. *Academy of Management Journal*, *48*, 594-606.

- Shrader, R., & Siegel, D. S. (2007). Assessing the Relationship between Human Capital and Firm Performance : Evidence from Technology-Based New Ventures. *Entrepreneurship Theory and Practice*, 31, 893-908.
- Shaver, K. G. (1995). The entrepreneurial personality myth. *B&E Review*, April-June, 20–23.
- Snell, S. A., & Dean, J. W., Jr. (1992). Integrated manufacturing and human resource management: A human capital perspective. *Academy of Management Journal*, 35, 467- 504.
- Srivastva, S. (1983). *The executive mind*. San Francisco: Jossey-Bass Publishers.
- Triandis, H. C. (1989). Collectivism and individualism: A reconceptualization of a basic concept in cross-cultural social psychology. In G. K. V. C. Bagley (Ed.), *Personality, attitudes, on motivation*. Lincoln: University of Nebraska Press.
- Ulrich, D. O., & LaFasto, F. (1995). Organizational culture and human resource management In G. R. Ferris, S. D. Rosen & D. T. Barnum (Eds.), *Handbook of Human Resource Management* (pp. 317-336). Cambridge, MA: Blackwell Publishers.
- Welbourne, T. M., & Andrews, A. O. (1996). Predicting the performance of initial public offerings: Should human resource management be in the equation? *Academy of Management Journal*, 39, 891-919.
- Williams, R. M. Jr. (1979). Change and stability in values and value systems: A sociological perspective. In M. Rokeach (Ed.), *Understanding human values* (pp. 15-46). New York: Free Press.
- Wright, P. M., & McMahan, G. C. (1992). Theoretical perspectives for strategic human resource management. *Journal of Management*, 18, 295-320.
- Wright, P. M., Smart, D. L., & McMahan, G. C. (1995). Matches between human resources and strategy among NCAA basketball teams. *Academy of Management Journal*, 38, 1052- 1074.
- Wright, P. M., & Snell, S. A. (1998). Toward a unifying framework for exploring fit and flexibility in strategic human resources management. *Academy of Management Journal*, 23, 756-772.
- Youndt, M. A., Snell, S. A., Dean, J. W. J., & Lepak, D. P. (1996). Human resource management, manufacturing strategy, and firm performance. *Academy of Management Journal*, 39, 836-866.

Why Do Small Firms Produce More Entrepreneurs? A Test of the Pull and Push Hypotheses

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Empirical evidence has revealed that a disproportionately large number of people who work for small firms enter self employment. However, research to date has offered little help in explaining their motivations. This study tests whether people who work for small firms are pulled into, or pushed toward self-employment entry. This study draws upon a repeated cross-sectional sample of more than 160,000 employees from Taiwan's labor market database to test relative preferences of employees for three options: entry motivated by entrepreneurial opportunity, entry induced by job dissatisfaction, and non-transition. The results from the multinomial regression analysis show strong support for the pull hypothesis. Among people in small firms, the rate of opportunity-pulled entry is much higher than that of dissatisfaction-induced entry.

Introduction

Becoming an entrepreneur is not only potentially lucrative but also provides individuals with challenge and the opportunity to increase their influence, autonomy, and impact. For example, research has shown that the self-employed are more satisfied with their work, in part, due to the autonomy and flexibility in work schedule they experience (Hundley, 2001; Kawaguchi, 2008).

Given the significance of entrepreneurship, there appears to be a disproportionately large number of people who work for small firms starting their own businesses. Recent years have seen a regenerated interest in the influences of work environments on entrepreneurship (Gompers, et al., 2005; Dobrev and Barnett, 2005; Stuart and Ding, 2006; Sørensen, 2007). A review of the literature suggests various paths through which the bureaucratic life in large organizations might restrict entrepreneurial aspiration¹. Despite the strong evidence for workplace effects, due to the specialized nature of the samples employed in previous studies, such as business school graduates (Dobrev and Barnett, 2005), publicly traded corporations

¹ Ideally, these effects could be tested with organizational age, and could also be examined directly with detailed information on organizational culture and employment policies. Unfortunately, such information was not available in the data set used here.

(Gompers, et al., 2005), and data on the Danish labor market that are typically characterized by equitable social support (Sørensen, 2007), these research offer little help in advancing our understanding of the fundamental motivations that lead those who work for small firms to become entrepreneurs.

The aim of this study is to analyze the data of the Taiwanese labor market to identify the motivations of those who work for small firms to become entrepreneurs, and explain the reason for their disproportionate interest in entrepreneurship. We propose that there may be either positive factors that pull people in small firms into creating a new firm, or negative factors that push them toward it. We first discuss positive pull factors that influence the aspiration for entrepreneurship among workers in small firms. We then discuss negative push factors, and the alternative mechanism for explaining the supply of entrepreneurs from small organizations.

In this study, the data on the Taiwanese labor market were used to test which of the motivations is dominant in leading people in small firms to enter an entrepreneurial career. We also attempt to identify the specific motivation pushing “dissatisfied” people in small firms toward entrepreneurship, using a sample of individuals dissatisfied with their work conditions.

The major challenge in isolating the effect of small organizations on entrepreneurial entry is to address the movement of individuals toward other paid jobs. Accounting for such turnover process requires a research design in which individuals are not only observed as they enter entrepreneurship but also as they switch jobs within the paid employment sector. We therefore analyzed the relationship between work conditions and the rate of entrepreneurial transitions using a rich, matched employer-employee data set that characterizes individuals in the Taiwanese labor market between 1995 and 2006.

These data allowed us to observe, to a much greater extent than in previous research,

entrepreneurs as they switch jobs within non-entrepreneurial activities as well as between entrepreneurial and non-entrepreneurial activities. An empirical model of multinomial choice also allowed us to test how ceteris paribus changes in firm size affect the choice of the individual between opportunity-pulled and dissatisfaction-induced entrepreneurship.

Literature Review

Motivations for Transition to Entrepreneurship

The reasons entrepreneurs give for starting businesses are of practical, as well as academic interest. One prominent account suggests that there may be factors that either pull, or push individuals toward starting a business. Specifically, for example, according to the 2006 Global Entrepreneurship Monitor (GEM) report for the United States (Phinisee, Allen, Rogoff, Onochie, and Dean, 2007), 10.5 percent of Americans between 18 and 64 years of age were starting their businesses that could improve their conditions, and 1.2 percent were starting their businesses , due to the lack of alternatives for employment. A study by Kolvereid (1996) addressed the reasons for career preference. He used an open-ended format to capture a wider range of reasons, and sampled alumni from a 4-year master's program in business administration in Norway. From the data, Kolvereid identified 11 reasons for preferring either self-employment or paid employment based on a representative sample of the alumni where 91 percent were not self-employed. Kolvereid found that economic opportunity, authority, autonomy, challenge, self-realization, and participation in the entire process were reasons for preferring self-employment, whereas security, workload, and autonomy were the reasons that the respondents provided for preferring paid employment.

Based on the underlying rationale that an individual can reduce job dissatisfaction by becoming an entrepreneur, job dissatisfaction has been suggested as another reason for choosing an entrepreneurial occupation. Hisrich and Brush (1986) examined the reasons and

motivations for minority entrepreneurs' decisions to start a business. They found that the top reasons cited for starting a business were interest in the business area (58 percent) and frustration with an existing job (32 percent). The third reason for starting a business was termination from a current job, which was cited by 5 percent of the respondents. Brockhaus (1980) examined whether dissatisfaction with previous job was what pushed entrepreneurs to start a business. Sampling entrepreneurs who had left their employment up to 3 months prior to the study and two groups of managers who had either been promoted within their organization, or changed employer within 3 months of the study, Brockhaus found that entrepreneurs were more dissatisfied than the two groups of managers with all aspects of their previous job with one exception: pay. In summary, there has been the presumption in previous research that the absence of better opportunities for reducing experienced job dissatisfaction is also a major factor that pushes a person out toward starting a firm.

Economic Opportunity as a Reason for Entrepreneurship among Workers in Small Firms

A review of the literature suggests at least four different and possibly complementary contextual mechanisms through which working for small firms might influence the individual rate of entrepreneurial entry (Gompers, et al., 2005; Dobrev and Barnett, 2005; Wagner, 2004).

First, working for small firms requires more intellectual flexibility. This may influence the attitudes and mind-set of employees in ways that make them more likely to enter entrepreneurship. Second, work in small firms may facilitate development of the skills necessary for successful entrepreneurship and may therefore raise the expected value of entrepreneurial opportunities. If successful entrepreneurship activity requires the command of a wide variety of roles, then individuals with diverse work experiences will find

entrepreneurial opportunities more attractive (Lazear, 2005). The average diversity of work experiences should be higher among workers in small firms, implying that rates of entrepreneurial entry will be higher among employees in small firms. Third, work in small firms may give employees access to a network of buyers and suppliers, increasing the exposure to entrepreneurial opportunities. Finally, organizational structure of small firms decrease the opportunity costs of leaving paid employment.

Sørensen (2007) examined whether the correlation between organizational size and entrepreneurship is a spurious consequence of unobserved sorting process of individuals into small firms in which people choose jobs consistent with their work values. Strong preferences for autonomy that would lead people to become entrepreneurs are also preferences that would lead them to work for small firms. Sørensen used longitudinal data set in the Danish labor market, and provides strong evidence to suggest that this negative effect of firm size does not spuriously reflect self-selection of individuals who have particular preference into small firms.

We sought to reexamine the literature on workplace effects on entrepreneurial entry and develop linkages between work conditions and their efficacy for individual motivation for entrepreneurial transition. A review of literature suggests that workers in small firms have more direct experience of the firm's external environment, or have more social ties with customers and subcontractors (Dobrev and Barnett, 2005; Sørensen, 2007). Workers in small firms are more outwardly focused on average, but as the firm develops in size, bureaucratic function oriented to internal coordination and control becomes more prevalent, making workers more inwardly focused. Moreover, access to an extensive network of customers and subcontractors places individuals in a better position to identify entrepreneurial opportunities (Saxenian, 1994; Sørensen and Audia, 2000; Gompers et al, 2005). For example, an extensive use of a web of subcontracting networks can reduce sunk entry cost, and provides an effective

guide to potential customers. This suggests that social ties with actors in the firm's external environment may provide those who work for small firms with the intense exposure to entrepreneurial opportunities and activities.

Hypothesis 1: The rate of opportunity-pulled entrepreneurship is higher for workers in small firms than for those in large firms.

Job Dissatisfaction as a Reason for Transition to Entrepreneurship among Workers in Small Firms

The evidence in the literature on entrepreneurial motivation for a positive relationship between job dissatisfaction and entrepreneurship seemingly supports the claim that work condition is also an important driver of entrepreneurial motivations.

Although it has not been widely studied empirically, there is indirect evidence of at least two different and possibly complementary mechanisms through which workplace size influences the individual rate of job-dissatisfaction-induced entry. First, casual observation suggests that turnover behaviors of people in small firms are somehow different from those of people in large firms. An employee's career prospects within a small organization are more dependent on personal relationships. Furthermore, the flat organizational structure of small firms relative to large firms makes internal advancement less attractive career.

Because these factors increase job dissatisfaction, the employees of small organizations should be more willing to move to organizations larger than the current. However, alternatives for employment are not assigned randomly to people who work for employers of different sizes. Rather, the labor market matches in job search occur through choices by both employers and employees. Individuals seek for jobs in part conditional on the current employer's characteristics. Extensive research suggests that large firms pay higher

wages than small one, and a number of theories argue that employer size is a proxy for unobserved worker skills such as computer skills or the ability to work as a team (for a review, see Troske, 1999).

The theory of turnover suggests that a worker-employer match dissolves when the new information about an alternative prospective match arrives, or employer and worker detected mismatch through the process of learning (Jovanovic, 1979). The distribution of prospective match is determined by worker ability because employers are selective in choosing whom they hire and retain. A large firm may not tolerate low-skilled, low-paid workers who have worked for small firms, whether or not the organization has a formal internal labor market.

More direct evidence that people in small firms face obstacle in moving to larger organizations can be found by considering the association between the size of current and previous employers of an individual who has changed the job. Table 1 presents the two-way tabulation of size of previous employers and that of current employers for individuals who had changed their job during the previous year in Taiwan². Table 1 shows that people who had worked for small firms in the previous year are underrepresented in the categories of employees hired by large firms in the current year.

Second, employees of small firms are more likely to undertake a broad range of tasks, and a wide variety of roles (Sørensen, 2007), but an elaborate division of labor in large firms rewards depth of skills as opposed to breadth. Individuals with diverse work experiences will find entrepreneurial opportunities more attractive (Lazear, 2005). The average diversity of work experience should therefore be higher among workers in small firms. This implies that those who work for small firms will on average find starting a business easier.

² The data for this table come from the sample of the Taiwanese labor market described below.

Obstacles for turnover lead people in small firms to start a business, where they have more opportunities to maximize the return on their entrepreneurial skills. This suggests that the correlation between firm size and the individual rate of entrepreneurship detected in previous research can also be explained, at least in part, by the constraints imposed on the job search activity of people in small firms.

Hypothesis 2: The rate of dissatisfaction-induced entrepreneurship is also higher for workers in small firms than for those in large firms.

Although it has not been widely studied systematically, across many of the previous studies, there appears to be support for both pull and push factors that affect the individual rate of entry from small firms. The prior literature would lead us to propose either that (1) entrepreneurial opportunity pulls worker in small firms toward starting a business more strongly than job dissatisfaction pushes toward it, or that (2) job dissatisfaction pushes them toward starting a business than the opportunity pulls toward it. Thus, we propose the following two rival hypotheses:

Hypothesis 3: For workers in small firms, the dominant motivation for entrepreneurial entry is likely to be the expectation for the economic opportunity.

Hypothesis 4: For workers in small firms, the dominant motivation for entrepreneurial entry is likely to be the experienced job dissatisfaction.

As Figure 1 demonstrates, the two types of motivation have different mechanisms of entrepreneurial entry. Opportunity-pulled entrepreneurship results from the expectation of increased

life satisfaction, making people in small firms actively pursue new opportunities. In contrast, dissatisfaction-induced entrepreneurship is the result of the lack of alternative for reducing job dissatisfaction. The lack of opportunities for moving to larger organizations leads individuals in small firms to start their firms to resolve specific problems they experienced.

Research Methodology

Source of Data

We analyzed data on the Taiwanese labor market from a database called the Manpower Utilization Survey (MUS) from 1995 through 2006. Most explanations of the Taiwanese labor market characterize it as very flexible and dynamic. It is more dynamic than the labor markets in the U.S. and other industrialized countries in the level of worker turnover (Tsou, Liu, and Hammitt, 2001). Compared with the U.S. and other industrialized countries, the Taiwanese labor market includes a large proportion of SMEs and flexibility of SMEs contributes to high turbulence in the labor market. It is also relatively free from union intervention and governmental regulation. There are also few barriers to entry into entrepreneurship, due largely to the low threshold entry costs stemming from the presence of a dense network of subcontractors.

The MUS is constructed from household registers and maintained by the Directorate-General of Budget, Accounting, and Statistics (DGBAS). This extract covers all people residing legally in the Taiwan area who were the ages of 15 or older. The subjects were drawn through a random stratified sampling procedure. As a first step in executing this survey, approximately 520 geographical administrative units were randomly sampled from the entire Taiwan area; as a second step, approximately 20,000 households were sampled within the sampled administrative units. The total sampling rate was 3.1 percent and the sample comprised approximately 60,000 individuals in each year. Each household is surveyed for two consecutive years, under the rotating sampling method used in the MUS.

Ideally, individual data can be merged into a short panel data set. However, individual unique ID is not released due to confidentiality concerns.

From this data source, we constructed a sample for the current analyses, and the sample consists of individuals who (a) were employed; (b) were between ages of 20 and 59; (c) were not employed in the primary sector (agriculture, mining and extractive industries) or in the public sector; (d) were successfully matched with the data on their spouse; (e) were not employed in a firm managed by family member; (e) responded to the interview by themselves; (f) had not changed jobs twice or more. These criteria are all applied to the information at the time when an individual chooses whether to become an entrepreneur.

Our model includes the indicator of the number of children that the employee had, but its information was not reported by male respondents but only by female ones. Thus, for male observations, we needed to identify their spouses. In order to obtain spouse data, we identified marital relationships according to each family member's relationship with the household head. For example, if an employee was a "son of the household head," we identified the spouse as a family member whose family role was "the wife of the household head's son." However, if this family had two or more married sons, we find more than one "wives of the household head's sons," thus we could not uniquely specify the employee's wife. This method also led to the exclusion of observations in which the spouse was living outside the target employee's household.

In order to control for the advantage of family members in internal advancement, we decided to exclude them, although we had to rely on relatively rough criterion. A member of the family firm was identified if (a) the respondent's household members work for the same firm, and (b) the household member working for the same firm occupies director positions. The identical firm was identified by the area of operation (at city, township, and village levels), industry code (at the two-digit SIC level), and organizational size. This definition is

useful at least in this study, although it is certainly inadequate to capture the realities of family firms. It should be noted, however, whether to include or exclude these individuals from the estimation does not change the results significantly.

Due to the potential unreliability of data, we excluded observations whose information was not responded by the persons in question (for example, the information responded by other household members). Some of the selected sample had changed jobs in a year prior to when an individual decide whether to become an entrepreneur, so their previous employment had been brief. These individuals were excluded from the sample. These selection criteria resulted in an estimation sample of 164,106 individuals.

Nevertheless, we were unable to control completely for the heterogeneities arising from the length of previous employment, because the individuals who had left the firm for entrepreneurship or turnover were not asked to indicate their tenures in previous employment. This omission cannot be ignored—especially with regard to Taiwan, where mobility in employment is considerably high. However, it should be noted that the test of the correlation between employer size and tenure using the sample of individuals who remained with the firm shows that the correlation coefficient was quite small ($\rho = 0.01$).

The MUS includes a series of questions designed to identify those who had changed the job in a year prior to the survey. Respondents were asked to indicate their employment status, including employment with private firms, employment with governmental agencies, unpaid family labor, unemployment, and self-employment. Except for unpaid family laborers and the unemployed, those who were working for 15 hours or more in a week are asked to indicate whether they had changed jobs in a year prior to the survey. Those who responded “yes” was then asked whether the quit from previous employers was voluntary, and to indicate the previous employment status.

Answers to these questions served to identify the transitions of paid workers to

another firm and to self employment. DGBAS employs two primary categories for self-employment. The first captures individuals who are business proprietors with employees; the second captures business proprietors with no employees. We treated entry into either of these two categories as transitions to entrepreneurship, consistent with the notion that a key component of the transition to entrepreneurship is the movement from paid employment to self-employment.

In most OECD countries, determining whether an individual is actually self-employed or not is not simple matter, because self employment is the reported occupation (Blanchflower, 2000). For example, in OECD countries, some of the individuals who report being self-employed are unpaid family workers. In the United States, the owners of larger businesses—also known as the incorporated self-employed—are usually treated as employees. However, DGBAS supplied a classification scheme that does not depend on occupational data but rely on status of employment. This substantially improves our ability to identify self-employed individuals.

A shortcoming of relying on the recollection of working population at the time of the survey interview and failing to ask non-working-population is that it does not capture the ongoing entry process of the individuals who had left organization in a year prior to the survey and were unemployed at the time of survey. However, adding organization formation process in which the unemployment period intervened between employment in one year and self-employment in the next to our measure of entrepreneurial entry generates confusing effects of unemployment on the rate of entry into self employment. Conceptually, an important component of entry into entrepreneurship defined in this study is the decision to give up employment; this decision process is presumably different for the unemployed.

Measures

Measurement of opportunity-pulled and dissatisfaction-induced entrepreneurship.

Those who had left employers voluntarily in a year prior to the survey, and had also been paid employees previously were then asked to cite a reason why they had left organization, from the following options: low job rewards, inconvenient location, lack of flexibility in working hours, a low level of job security, poor work environment, skill mismatch, unfavorable career prospect, ill health or injury, marriage and child rearing among female workers, voluntary retirement from employment, creating a new enterprise, and others.

Responses to this question were used to group the individuals into one of three behavioral categories that we refer to as employment choice. The intension and reason for leaving employer is likely to be related to the initiation of a search for alternatives, and also to the motivation for employment choice (for a review, see Schjoedt and Shaver, 2007).

The opportunity-pulled entrepreneur captures individuals who gave the reason, “to create a new enterprise by sole effort”, and whose current employment status was self-employment. The intension to create a new enterprise as a reason for leaving a job is driven by the motivation that reflects an expectation of increased life satisfaction and not by the motivation that might represent the intension to reduce job dissatisfaction.

As an expectation of increased life satisfaction spills over into the possibility of reducing job dissatisfaction, there may be interdependent relationships (Schjoedt and Shaver, 2007). For example, one might argue that some individuals might possibly cite the intension to create a new enterprise as a reason for entrepreneurial transition even though they have experienced a high level of job dissatisfaction, because the career option is potentially lucrative. On the other hand, individuals are much more likely to take action upon negative information rather than the positive (Shapero and Skhol, 1982). Whatever the independence of positive and negative factors may be, it is clear that this group of individuals showed much

greater response to positive information than to negative.

The dissatisfaction-induced entrepreneurs capture those who have left organization giving one of the reasons cited above other than “creating a new enterprise by sole effort”, and whose current employment status was self-employment. We censored transitions to self-employment when the reasons for leaving organization were the followings: “ill health, injury”; “marriage and child rearing” among female workers; or “voluntary retirement from employment”. These motivations are likely to be different from job dissatisfaction. Finally, turnover captures individuals who left the organization giving the same set of reasons, but current employment status was paid employees working for the private sector.

Two comparison groups were utilized in this study according to the particular objectives of analysis. In the assessment of choice between opportunity-pulled and dissatisfaction-induced entrepreneurship, a group of individuals who had remained with employers was utilized to test relative tendency of individuals to either opportunity-pulled entrepreneurship or dissatisfaction-induced entrepreneurship. As a comparison group for the assessment of mechanism of career choice of dissatisfied individuals, a group of individuals who responded that they (a) were willing to change jobs, (b) but had not initiated a search for alternatives, was utilized to analyze the choice of dissatisfied individuals between entrepreneurial transition and turnover.

Multinomial logistic regression was adopted to test the relative preference of individuals to each option. We adopted this method, although it has a major limitation. The model is estimated on the assumption that unobserved individual preference that drive opportunity-pulled entrepreneurship are independently distributed from those that drives dissatisfaction-induced entrepreneurship. One concern with this estimate, however, is that the probability of choosing opportunity-pulled entrepreneurship may be affected by the same individual’s work value such as preference for autonomy that affects the probability of

choosing dissatisfaction-induced entrepreneurship.

Estimation of individual fixed-effects requires variation in independent variables in the history of the same individual. Unfortunately, individual-fixed effects are not identified when within-person variation in independent variables is not included, as is the case here. This restriction suggests that the results should be interpreted with caution.

Table 2 gives the top five industries that entrepreneurs have chosen as the place of entry by the entrepreneurial motivation. As is the case in many other countries (Shane, 2003), many of the top five industries appear to require little startup capital. The top industry for dissatisfaction-induced entrepreneurs was food and beverage services, and it appears to require the least initial investment. The top 5 industries for opportunity-led entrepreneurs also largely require little initial investment, but some industries (e.g., transportation and storage) appear to require a larger amount of initial capital.

Table 3 presents the top five reported occupation of newly self employed individuals by the entrepreneurial motivation. Few differences are detected between the two types of entrepreneurial motivations. Regardless of whether the motivation was opportunity-led or job-dissatisfaction-induced, major reported occupations appear to be associated with customer sales and service work.

Measurement of firm size

We measured organizational size as the number of workers. Because the questions which appear in the MUS requested the respondent to indicate which of 8 size bands represented the establishment they worked for, we used dummy variables to differentiate between different size groups. Because the employment structure of the Taiwanese labor market is skewed toward small firms as compared to the standard of OECD countries, we settled on four size groups: 1 to 9 workers, 10 to 49 workers, 50 to 199 workers, and 200 or

more workers.

Control Variable

Female Gender Differences were captured by a 0/1 indicator coded as 1 if the respondent was a female.

The Number of Dependent Children While employees having more children are more likely to be risk averse, emotional support from their families might encourage their entrepreneurial aspiration. In order to capture the possible heterogeneity arising from family structure, we used the total number of children aged 18 or younger residing within households as a control for family structure.

Individual Age Employee age and the square of age were also utilized. The effect of age might be quadratic since age represents the length and diversity of work experience and the amount of financial and social capital; however, at the same time, it signifies decreasing physical strength and depreciating investment in those capitals.

Education Education appears to raise the returns from paid employment, thus lowering the probability of entrepreneurial transition. In order to describe the effect of the employee's education, our model includes the years of education individuals had received.

Industry Fixed Effects The industry of previous employer was controlled for six 0/1 indicators. The industries were categorized as manufacturing, construction, wholesale and retail trade, with remaining industries being the reference.

Occupation 7 dummy variables representing broad categories for previous occupation were included in the model.

Year Effects Since we utilized observations over 12 years, the specification included 11 year dummies that control for year-specific factors.

Expected Wage Rate Finally, previous wages were included in our model, for the following

two reasons. First, given the wage differentials between large- and small-firm employees, entrepreneurial success tends to result in a greater relative increase in the lifetime earnings of small business employees as compared to those of their counterparts in large firms, thereby leading more small business employees to leave in order to start a new firm.

We held constant the future prospects and opportunity costs by introducing a wage variable in regression equations. By means of this variable, the effects of organizational size hypothesized earlier were distinguished from those of both lifetime earnings and opportunity costs. Since the amount of wages that they will receive if they remain with the employer is observed for only for those who have chosen to remain with organization, predictions are required. The prediction is based on standard Mincer earnings functions of the kind:

$$y_i = x_i' \beta + \varepsilon_i ,$$

where y_i represents (log of) hourly earnings of the i th observation that depends on the vector x which includes: an individual's years of education; years of experience (age minus years of education, minus 6) and its square; and dummy variables for females, married individuals, size and industry of previous employer, occupational categories, and survey year. This model was estimated simultaneously with a selection equation. The issue of identification was addressed using an approach similar to Rees and Shah (1986). The selection equation contained an additional variable reflecting the number of dependent children.

Table 4 provides the descriptive statistics and correlations of the variables of interest. About four in ten employees were females. The average number of children in the household was 0.7, and the average age was 32.9 years. The average employee received 11 years of education. 43 percent of workers work in workplace with 2 to 9 workers, and 35 percent work in one with 10 to 49 workers, and 13 percent, in one with 50 to 199 workers. The average employee will potentially receive hourly earnings of 147 New Taiwan dollars (roughly equivalent to 4 US dollars) in the following year if they continue to work for current

employer.

Results

Table 5 presents estimates from the multinomial logit models of transition to self-employment. The three possible outcomes are remaining with organization (status = 0), dissatisfaction-induced entrepreneurship (status = 1), and opportunity-pulled entrepreneurship (status = 2). In Columns 1 and 2 of Table 5, the base category is remaining with organization. Not presented in Table 5, but included in the models are dummy variables for survey year.

In Column 1 of Table 5, the estimates for the effects of dummy variables for the categories of the number of workers in workplace, 1 to 9 workers, 10 to 49 workers, and 50-199 workers are all highly significant and positive. This suggests that the rate of opportunity-pulled entrepreneurship of an employee in small firms is substantially higher than that of homogeneous employee in observed characteristics working for large firms. This confirms Hypothesis 1. The estimate for marginal effects suggests that the rate of opportunity-pulled entrepreneurship of an employee in an establishment with 2 to 9 workers decreases by 0.8 percent when the employee moves to an establishment with 200 workers or more.

The estimates for the effects of dummy variables for workplace size, 1 to 9 workers, 10 to 49 workers, 50 to 199 workers in Column 2 are all highly significant and positive. This implies that working for small firms also significantly raises the rate of dissatisfaction-induced entrepreneurship. This lends support for Hypothesis 2. The estimate for marginal effects suggest that a person working in an establishment with 2 to 9 workers is 0.3 percent more likely to enter dissatisfaction-induced entrepreneurship than someone working in an establishment with 200 workers or more.

In Columns 3 of Table 5, the base category is dissatisfaction-induced entrepreneurship. The estimates for the effects of two of three establishment size variables, establishment with 1 to 9 workers and that with 10 to 49 workers are significant and positive. This suggests that the employee in small firms prefers opportunity-pulled entrepreneurship more strongly to dissatisfaction-induced entrepreneurship, as compared to the observationally homogeneous employee in large firms. This does not offer compelling support for Hypothesis 4 but confirms Hypothesis 3. The estimate for marginal effects suggests that the relative preference for opportunity-pulled entrepreneurship over dissatisfaction-induced entrepreneurship of an employee in an establishment with 2 to 9 workers is 0.8 percent higher than that of an observationally equivalent employee in an establishment with 200 or more workers.

Although relative preference of employees in small firms for dissatisfaction-induced entrepreneurship is weaker than that for opportunity-pulled entrepreneurship, small firms are more likely to generate dissatisfaction-induced entrepreneurship as compared to large firms. To assess whether the lack of turnover opportunities explain why people in small firms enter dissatisfaction-induced entrepreneurship, we restricted the sample to dissatisfied individuals, and tested whether people in small firms are more likely to become self employed than to move to other firm, conditional on job dissatisfaction.

We estimated multinomial logit models of the transition to self-employment using a sample of dissatisfied workers. The results are shown in Table 6. The three possible outcomes are a control group of individuals who are dissatisfied with the jobs but stayed with the firm (status = 0), turnover (status = 1), and dissatisfaction-induced entrepreneurship (status = 2).

In the first column in Table 6, the base category is the control group. As expected, the effect of dummy variables representing workplace size, 1 to 9 workers, 10 to 49 workers, and 50 to 199 workers, on log-odds between turnover and control group are all highly

significant and negative. Among individuals dissatisfied with their jobs, turnover is much less likely if the workplace is small.

In Column 2 of Table 6, the base category is the control group, and as predicted, the effects of dummy variables for workplace size, 1 to 9 workers, 10 to 49 workers, and 50 to 199 workers, on log-odds between entrepreneurship and the control group are all significant and positive. This result lends substantial confidence to our conjecture. For dissatisfied workers, the rate of entrepreneurship is substantially higher for those in small firms than for observationally equivalent workers in large firms. As the employer becomes smaller, dissatisfied individuals become substantially more likely to start a business, and much less likely to choose turnover.

In Column 3 of Table 6, base category is turnover. The effects of dummy variables representing workplace size, 1 to 9 workers, 10 to 49 workers, and 50 to 199 workers, on log-odds between entrepreneurship and turnover are all highly significant and positive. As predicted, among dissatisfied workers, entrepreneurial entry is much more likely than turnover, if they work for small firms.

To identify the specific work condition that drives dissatisfaction-induced entrepreneurship, we estimated multinomial logit models of specific categories of motivations. The results are shown in Table 7. Six possible outcomes are remaining with organization (status = 0, base category), and leaving previous jobs for the following reasons: low job reward (status = 1); inconvenient location (status = 2); lack of flexibility in working hours (status = 3); poor-quality work environment (status = 4); or unfavorable career prospect (status ==5).

In the model in Panel A of Table 7, the estimated effect of firms with 2 to 9 workers on log-odds between unfavorable career prospect and non-transition is highly significant statistically. None of the firm size variables is significant for the log-odds with other

motivational categories. Among dissatisfied workers, entrepreneurial transition induced by frustration with career prospect is much more likely, if the workplace is small. This result lends substantial support for our conjecture that the lack of opportunities for addressing obstacle in career development is what leads workers in small firms to enter an entrepreneurial career.

The results of the analysis of specific motivations for turnover are presented in Panel B of Table 7. This model is estimated on the sample of dissatisfied individuals who had moved to other firms, using non-transition as base category. The effects of firm size variables on unfavorable career prospect are not significant. This means, for example, that the likelihood of citing career prospect as a motivation for turnover is the same among workers in small firm as it is among workers in large firms. These analyses suggest that the fundamental motivation of small firm workers for leaving the employer is distinctively different between those who decided to become self employed and those who chose turnover. This result also lends substantial confidence to the earlier results.

Conclusion

The debate in entrepreneurship research about whether the opportunity pulls or the job satisfaction pushes individuals toward entrepreneurship has been a long-standing academic puzzle. This study presents empirical evidence suggesting that working for small firms makes people more likely to be pulled into entrepreneurship than to be pushed toward it. Although people in small firms are more likely to enter self-employment responding to negative factors than those in large firms, controlling for a wide range of observable individual characteristics, dominant motivation of people in small firms for becoming entrepreneurs is positive pull factors.

The result is also robust with dispositional account emphasizing stable individual

traits. For example, even if people with high preferences to autonomy choose to work for small firms, the result in this study suggests that such people are more likely to become opportunity-pulled entrepreneurs than to become dissatisfaction-induced entrepreneurs.

While this study suggests that the impact for dissatisfaction-induced entrepreneurship is statistically weaker, the results also provide compelling support for our claim that the obstacles in career development may help explain the reason why people in small firms are pushed toward entrepreneurship as compared to those in large firms. The analysis using a sample of dissatisfied workers suggests that these effects are not a mere consequence of the disparity of employee's job satisfaction between large and small firms. The effects of firm size are substantial in structuring employees' access to turnover opportunities, as evidenced by the statistically significant negative effect of small firms on workers' rate of turnover, and the strong, positive effect on the rate of entrepreneurship. Moreover, the analysis using more detailed information on the specific categories of motivations suggests that unfavorable career prospect is the most significant determinant that motivates dissatisfied people in small firms to become entrepreneurs.

Although the impact of firm size is weaker for dissatisfaction-induced entrepreneurship than for opportunity-pulled entrepreneurship, individual entrepreneurial activity provides an important career option for people in small firms facing less favorable work conditions. This is not, however, the same as saying that people in small firms less satisfied with their work conditions are better off, when they become entrepreneurs, because the results of this study do not offer performance implication. When a person experiences job dissatisfaction, he/she is more likely to become an entrepreneur than to engage in turnover, if he/she works for a small firm.

Several issues remain to be addressed in future research. First, with strong evidence of workplace effects on entrepreneurship in hand, research should turn to utilize a more

detailed measure of motivations. Second, much work remains to be done on how to avoid problems like retrospective reporting of motivation of individuals. To be more specific, this study had to rely on entrepreneurs' recollection when gathering data on the reasons for leaving previous jobs. Similarly, while grouping of entrepreneurs according to the reason for leaving previous jobs has usefulness of being easy to observe, they are imperfect measures of motivation; for example, entrepreneurs who cited the same frustration with their previous employment may vary in the intensity of the frustration.

Third, since our approach only focused on the most recent employment, the omission of the variables representing workers' entire career history, such as the diversity of work experiences and the total number of the organizations for which the workers had worked, might impose limitations on this study. Although part of the influences of such factors was captured by the inclusion of individual age, they were imperfectly measured in our empirical analysis. Further research in this direction should also reveal whether access to finance is a determining factor in the effect of the work environment upon entrepreneurial transitions. For example, a more detailed analysis might demonstrate the importance of the informal networks of subcontractors and customers for those in small firms in obtaining startup finance.

Fourth, with respect to the measurement of organizational characteristics, the effect attributed to firm size may reflect the effects of unmeasured firm characteristics. One might worry, for example, that the different rates of entrepreneurship are not derived from flat organizational structure, but other factors such as organizational culture or the employer's employment policies. Resolving such measurement challenges should be an important goal for future research.

The results have important policy implications as well. Policies to promote entrepreneurship often focus on improving entrepreneurial infrastructure and access to

necessary resources in regions or industries. Such policies seem to focus on removing obstacles to entrepreneurship, on the assumption that there is a supply of entrepreneurs being ready to pursue opportunity.

The impact of firm size on individual rates of opportunity-pulled and dissatisfaction-induced entrepreneurship suggests the importance of considering the indirect effects of policies not directly related to entrepreneurship such as policies that support and sustain small firms in regions or industries. First, the dominant impact of firm size on individual rates of opportunity-pulled entrepreneurship suggests that individuals working for small firms are more likely to start a business considering positive pull factors. Those in small firms are, despite being satisfied with their existing jobs, starting new firms. Thus, policies to improve compensation and work conditions in entrepreneurship may be more likely to succeed in regions and industries dominated by small firms. Second, the substitution relationship between turnover opportunities and dissatisfaction-induced entrepreneurship highlights the importance of considering the effects of policy schemes designed to promote the development of skills among workers in small firms, such as worker training program designed specifically for small business. Such policies will not only expand career options for dissatisfied workers in small firms, they may also lead to a shift of the workers' preference from entrepreneurship to paid employment.

References

- Blanchflower, D. G. (2000). Self-employment in OECD countries. *Labour Economics*, 7, 471-505.
- Brockhaus, R. H. (1980). The effect of job dissatisfaction on the decision to start a business. *Journal of Small Business Management*, 18, 37-43.
- Dobrev, S. D. & Barnett, W. P. (2005). Organizational roles and transition to entrepreneurship.

- Academy of Management Journal*, 48, 433-449.
- Gompers, P., Lerner, J. & Scharfstein, D. S. (2005). Entrepreneurial spawning: public corporations and the genesis of new ventures, 1986 to 1999. *Journal of Finance*, 60, 577-614.
- Hisrich, R. D. & Brush, C. (1986). Characteristics of the minority entrepreneurs. *Journal of Small Business Management*, 24, 1-8.
- Hundley, G. (2001). Why and when are the self-employed more satisfied with their work? *Industrial Relations*, 40, 293-316.
- Kawaguchi, D. (2008). Self-employment rents: evidence from job satisfaction scores. *Hitotsubashi Journal of Economics*, 49, 35-45.
- Kolvereid, L. (1996). Organizational employment versus self-employment: reasons for career choice intentions. *Entrepreneurship Theory and Practice*, 21, 23-31.
- Lazear, E. P. (2005). Entrepreneurship. *Journal of Labor Economics*, 23, 649-680.
- Phinisee, I., Allen, I. E., Rogoff, E. R., Onochie, J. & Dean, M., (2008). *Global Entrepreneurship Monitor National Entrepreneurial Assessment for the United States of America* (Executive Report, 2006-2007 edition).
- Rees, H. & Shah, A. (1986). An empirical analysis of self-employment in the U.K. *Journal of Applied Econometrics*, 1, 95-108.
- Saxenian, A. (1994). *Regional Advantage*. Harvard University Press, Cambridge, MA.
- Schjoedt, L. & Shaver, K. G. (2007). Deciding on an entrepreneurial career: a test of the pull and push hypotheses using the Panel Study of Entrepreneurial Dynamics data. *Entrepreneurship Theory and Practice*, 31, 733-752.
- Shane, S. (2003). *A General Theory of Entrepreneurship*. Edward Elgar, Cheltenham, UK.
- Shapiro, A. & Sokol, L. (1982). The social dimensions of entrepreneurship. In *Encyclopedia of Entrepreneurship*. Edited by Kent, C. A., Sexton, D. L. and Vesper, K. H.

Prentice Hall, Englewood Cliffs, NJ.

- Stuart, T. E. & Ding, W. W. (2006). When do scientists become entrepreneurs? the social structural antecedents of commercial activity in the life sciences. *American Journal of Sociology*, 112, 97-144.
- Sørensen, J. B. (2007). Bureaucracy and entrepreneurship: workplace effects on entrepreneurial entry. *Administrative Science Quarterly*, 52, 387-412.
- Sorensen, O. & Audia, P. G. (2000). The social structure of entrepreneurial activity: Geographic concentration of footwear production in the United States, 1940-1989. *American Journal of Sociology*, 106, 424-462.
- Troske, K. R., (1999). Evidence on the employer size-wage premium from worker-establishment matched data. *Review of Economics and Statistics*, 81, 15-26.
- Tsou, M., Liu, J. & Hammit, J. K. (2001). Worker flows and job flows in Taiwan. *Economics Letters*, 73, 89-96.
- Wagner, J. (2004). *Are young and small firms hothouses for nascent entrepreneurs? evidence from German micro data* (Institute for the Study of Labor Discussion Paper 989).

Table 1
Size of previous employer of individuals who have changed their jobs in the previous year, by size of current employer

		Size of previous employer (number of workers)							Total
		2-9	10-29	30-49	50-99	100-199	200-499	500+	
Size of current employer (number of workers)	2-9	1,844	626	171	135	95	59	46	2,976
	%	(61.96)	(21.03)	(5.75)	(4.54)	(3.19)	(1.98)	(1.55)	(100.00)
	10-29	805	921	227	135	102	46	55	2,291
	%	(35.14)	(40.20)	(9.91)	(5.89)	(4.45)	(2.01)	(2.40)	(100.00)
	30-49	214	284	259	103	67	45	29	1,001
	%	(21.38)	(28.37)	(25.87)	(10.29)	(6.69)	(4.50)	(2.90)	(100.00)
	50-99	155	191	121	175	85	41	43	811
	%	(19.11)	(23.55)	(14.92)	(21.58)	(10.48)	(5.06)	(5.30)	(100.00)
	100-199	139	139	92	100	171	56	55	752
	%	(18.48)	(18.48)	(12.23)	(13.30)	(22.74)	(7.45)	(7.31)	(100.00)
	200-499	81	69	37	44	76	92	60	459
	%	(17.65)	(15.03)	(8.06)	(9.59)	(16.56)	(20.04)	(13.07)	(100.00)
	500+	97	83	44	44	69	52	130	519
	%	(18.69)	(15.99)	(8.48)	(8.48)	(13.29)	(10.02)	(25.05)	(100.00)
	Total	3,335	2,313	951	736	665	391	418	8,809
	%	(37.86)	(26.26)	(10.80)	(8.36)	(7.55)	(4.44)	(4.75)	(100.00)

Figure 1
Career choice for workers in small firms

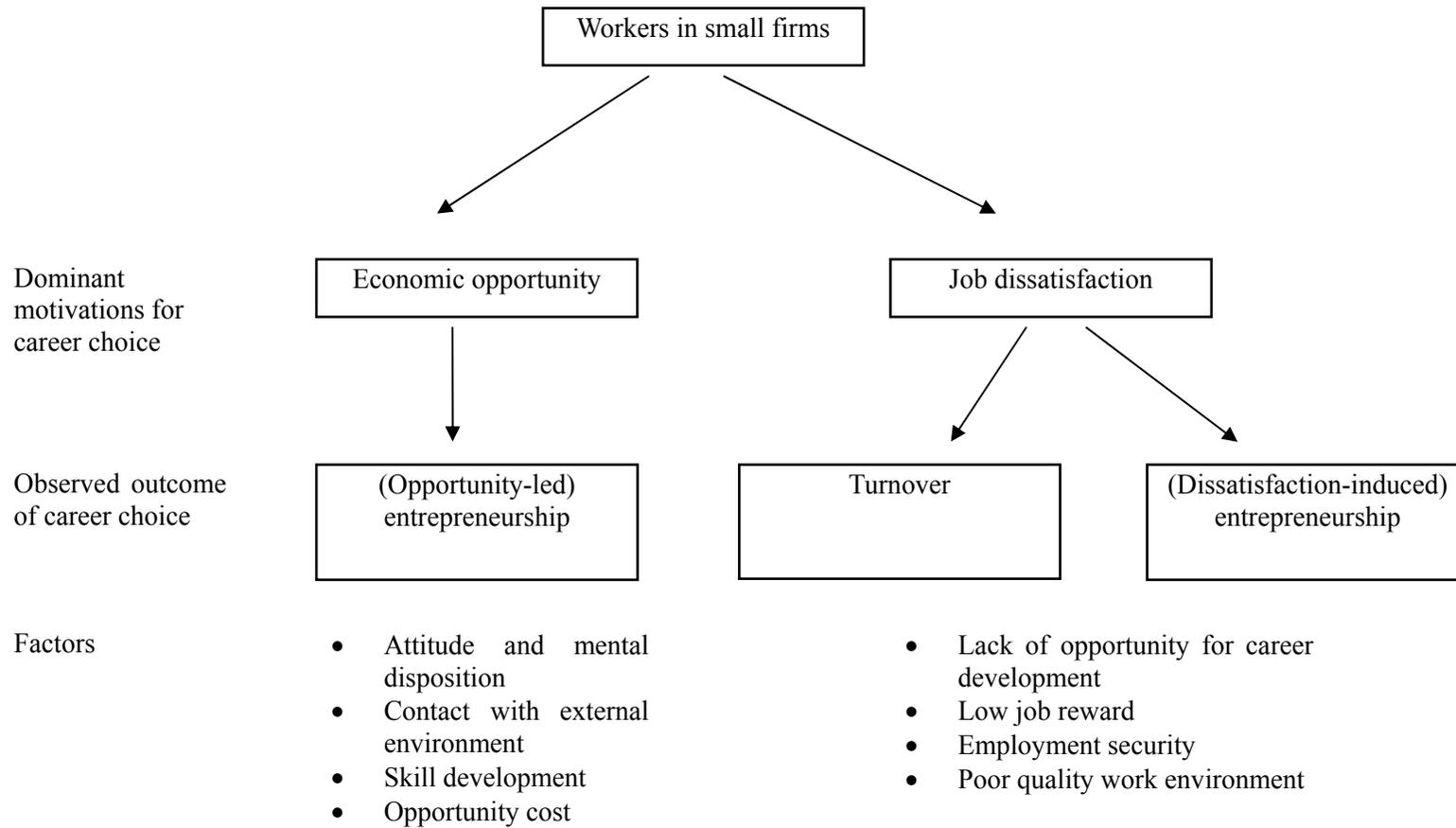


Table 2
The industry where entry occurred, by the type of entrepreneurship: top 5

Job-dissatisfaction-induced entrepreneurship		Opportunity-led entrepreneurship	
Industry name	<i>N</i>	Industry name	<i>N</i>
<i>Top 5 industry</i>		<i>Top 5 industry</i>	
Food and beverage services		Retail sale of living necessities	
	130		132
Retail sale of living necessities		Maintenance and repair of personal and household goods ; other services not elsewhere classified	
	120		111
Maintenance and repair of personal and household goods; other services not elsewhere classified		Transportation and storage	
	80		101
Retail sale of building materials, fuel products, information and communication equipments, and automotives		Food and beverage services	
	36		87
Wholesale of living necessities		Retail sale of building materials, fuel products, information and communication equipments, and automotives	
	27		60

Table 3
Reported occupation of the newly self-employed, by the type of entrepreneurial motivation: top 5

Job-dissatisfaction-induced entrepreneurship		Opportunity-led entrepreneurship	
Occupation	<i>N</i>	Occupation	<i>N</i>
<i>Top 5 reported occupation</i>		<i>Top 5 reported occupation</i>	
Personal services workers	168	Models, salespersons and demonstrators	106
Models, salespersons and demonstrators	148	Personal services workers	77
Directors and chief executives	64	Drivers and mobile-plant operators	62
Metal, machinery and related trades workers	43	Agricultural, animal husbandry, forestry and fishing workers	41
Finance and business services associate professionals	29	Sales and services elementary occupations	34

Table 4
Descriptive statistics and correlations[†]

Variables	Mean	S.D.	Min	Max	1	2	3	4	5	6	7	8
1. Female	0.370	0.480	0	1								
2. Number of Dependent Children	0.690	1.090	0	6	-0.070							
3. Individual Age	32.960	8.680	20	59	-0.140	0.204						
4. Years of Education	11.350	2.980	0	21	0.081	-0.109	-0.380					
5. Expected Wage Rate	4.990	0.280	4.060	6.180	-0.562	0.199	0.354	0.302				
6. Establishment Size: 2-9 workers	0.430	0.500	0	1	-0.120	-0.006	0.016	-0.233	-0.243			
7. Establishment Size: 10-49 workers	0.350	0.480	0	1	0.035	-0.002	-0.007	0.035	0.012	-0.639		
8. Establishment Size : 50-199 workers	0.130	0.340	0	1	0.085	0.001	0.000	0.129	0.139	-0.343	-0.288	
9. Establishment Size : 200 workers or more	0.080	0.280	0	1	0.049	0.014	-0.017	0.197	0.240	-0.265	-0.223	-0.120

[†]S.D.: standard deviations

All models include dummy variables for occupational categories, industries of employer, survey year.

Table 5
Multinomial logit regression models of opportunity-pulled and dissatisfaction-induced entrepreneurship, and non-transition[†]

Variables	Pr (Opportunity-pulled Transition)/Pr (Non-transition)		Pr (Dissatisfaction-induced Transition)/Pr (Non-transition)		Pr (Opportunity-pulled Transition)/Pr (Dissatisfaction-induced Transition)	
Female	1.049**	(0.445)	0.458	(0.541)	0.591	(0.699)
Number of Dependent Children	-0.049	(0.042)	-0.161***	(0.051)	0.112*	(0.066)
Individual Age	-0.186**	(0.082)	-0.012	(0.108)	-0.173	(0.136)
(Individual Age) ² /100	0.096	(0.091)	-0.079	(0.123)	0.174	(0.152)
Years of Education	-0.136***	(0.038)	-0.089*	(0.048)	-0.047	(0.061)
Establishment Size: 2-9 Workers	3.596***	(0.468)	2.054***	(0.536)	1.541**	(0.710)
Establishment Size: 10-49 Workers	2.251***	(0.348)	1.312***	(0.395)	0.939*	(0.526)
Establishment Size: 50-199 Workers	1.254***	(0.270)	0.821***	(0.303)	0.433	(0.405)
Expected Wage Rate	8.062***	(1.674)	4.618**	(2.017)	3.443	(2.616)
Manufacturing	0.153	(0.178)	-0.410*	(0.219)	0.563**	(0.282)
Construction	-2.344***	(0.297)	-1.035***	(0.329)	-1.309***	(0.443)
Wholesale and Retail Trade	0.473***	(0.148)	0.128	(0.184)	0.344	(0.235)
Executives and Managers	-5.257***	(1.237)	-3.771**	(1.514)	-1.486	(1.951)
Professionals	-3.472***	(0.855)	-3.432***	(1.101)	-0.040	(1.391)
Assistant Professionals	-2.584***	(0.666)	-2.219***	(0.818)	-0.364	(1.053)
Clerical Workers	-2.001***	(0.507)	-2.070***	(0.626)	0.068	(0.804)
Service and Sales Workers	0.250	(0.281)	-0.083	(0.314)	0.333	(0.420)
Craft Workers	-1.767***	(0.477)	-1.752***	(0.558)	-0.015	(0.732)
Operators and Assemblers	-1.498***	(0.401)	-0.998**	(0.478)	-0.500	(0.623)
Constant	-39.740***	(6.505)	-25.971***	(7.651)	-13.769	(10.021)
Number of observations				164,106		
χ^2				791.509		
Log-likelihood				-6,641.59		
AIC				13,407.176		

[†] Robust standard errors are in parentheses. All models include dummy variables for the survey year.
* $p < .10$; ** $p < .05$; *** $p < .01$; **** $p < .001$: two-tailed test.

Table 6
Multinomial logit regression models of dissatisfaction-induced entrepreneurship, turnover, and non-transition, dissatisfied workers only[†]

Variables	Pr (Turnover)/Pr (Non-transition)		Pr (Dissatisfaction-induced Transition)/Pr (Non-transition)		Pr (Dissatisfaction-induced Transition)/Pr (Turnover)	
Female	-0.975***	(0.162)	0.974*	(0.581)	1.949***	(0.584)
Number of Dependent Children	0.025	(0.019)	-0.108*	(0.055)	-0.133**	(0.056)
Individual Age	0.069*	(0.035)	-0.078	(0.112)	-0.147	(0.113)
(Individual Age) ² /100	-0.089**	(0.042)	0.030	(0.127)	0.118	(0.128)
Years of Education	0.122***	(0.014)	-0.118**	(0.049)	-0.240***	(0.049)
Establishment Size: 2-9 Workers	-0.673***	(0.159)	2.015***	(0.564)	2.689***	(0.567)
Establishment Size: 10-49 Workers	-0.342***	(0.113)	1.171***	(0.411)	1.514***	(0.413)
Establishment Size: 50-199 Workers	-0.065	(0.083)	0.710**	(0.308)	0.775**	(0.308)
Expected Wage Rate	-3.661***	(0.593)	5.889***	(2.164)	9.550***	(2.176)
Manufacturing	-0.247***	(0.068)	-0.209	(0.234)	0.038	(0.235)
Construction	-0.197*	(0.102)	-1.289***	(0.347)	-1.092***	(0.350)
Wholesale and Retail Trade	-0.276***	(0.060)	0.086	(0.193)	0.362*	(0.192)
Executives and Managers	3.209***	(0.462)	-3.529**	(1.630)	-6.738***	(1.638)
Professionals	2.421***	(0.307)	-3.001**	(1.168)	-5.422***	(1.173)
Assistant Professionals	1.693***	(0.236)	-2.023**	(0.863)	-3.716***	(0.868)
Clerical Workers	1.165***	(0.180)	-1.715***	(0.651)	-2.880***	(0.655)
Service and Sales Workers	0.790***	(0.102)	0.185	(0.317)	-0.605*	(0.319)
Craft Workers	0.933***	(0.168)	-1.483**	(0.585)	-2.416***	(0.589)
Operators and Assemblers	0.978***	(0.144)	-0.696	(0.501)	-1.674***	(0.504)
Constant	15.357***	(2.201)	-28.390***	(8.276)	-43.747***	(8.322)
Number of observations				16,745		
χ^2				1,477.125		
Log-likelihood				-12,391.19		
AIC				24,906.389		

[†] Robust standard errors are in parentheses. All models include dummy variables for the survey year.
* $p < .10$; ** $p < .05$; *** $p < .01$; **** $p < .001$: two-tailed test.

Table 7
Tests of variations according to motivations for career choice, dissatisfaction-induced entrepreneurship, and turnover
Panel A: Dissatisfaction-induced transition to entrepreneurship[†]

Variables	Dissatisfaction-push Transition to Self-employment									
	Pr (Low Job Rewards)/Pr (Non-transition)	Pr (Inconvenient Location)/Pr (Non-transition)	Pr (Lack of Flexibility in Working Hours)/Pr (Non-transition)	Pr (Poor-quality Work environment) / Pr (Non-transition)	Pr (Unfavorable Career prospect)/Pr (Non-transition)					
Female	-1.115***	(0.378)	0.394	(1.069)	-0.435	(0.473)	-0.730	(0.562)	-0.008	(0.604)
Number of Dependent Children	-0.070	(0.081)	-0.028	(0.178)	0.013	(0.108)	-0.021	(0.142)	-0.272	(0.166)
Individual Age	0.358***	(0.116)	-0.036	(0.349)	0.270*	(0.146)	0.047	(0.173)	0.008	(0.157)
(Individual Age) ² /100	-0.472***	(0.152)	0.005	(0.438)	-0.358*	(0.185)	-0.033	(0.224)	-0.110	(0.211)
Years of Education	-0.029	(0.051)	-0.229*	(0.137)	-0.025	(0.078)	0.067	(0.087)	-0.080	(0.085)
Establishment Size: 2-9 Workers	0.047	(0.535)	-0.447	(1.154)	1.078	(0.878)	0.617	(0.991)	2.982***	(0.882)
Establishment Size: 10-49 Workers	-0.027	(0.472)	-0.465	(0.941)	0.571	(0.826)	0.755	(0.884)	1.404	(0.878)
Establishment Size: 50-199 Workers	0.182	(0.461)	-0.439	(0.811)	1.175	(0.796)	0.765	(0.843)	-0.019	(1.408)
Expected Wage Rate	-1.116	(1.199)	3.301	(4.029)	0.306	(1.869)	-0.667	(1.679)	4.452**	(1.939)
Manufacturing	-0.322	(0.277)	-0.904	(0.740)	-1.263***	(0.416)	-0.750	(0.466)	-1.264*	(0.674)
Construction	-0.565	(0.405)	-0.739	(0.717)	-0.052	(0.466)	-0.421	(0.629)	-1.454**	(0.720)
Wholesale and Retail Trade	-0.006	(0.280)	0.970	(0.601)	-0.786*	(0.402)	-0.683	(0.456)	0.263	(0.460)
Executives and Managers	0.665	(1.001)	1.014	(1.138)	0.337	(1.529)	0.878	(1.174)	-1.562	(1.527)
Assistant Professionals	0.110	(0.462)	-1.011	(1.131)	0.741	(0.643)	-0.472	(0.644)	-0.570	(0.630)
Clerical Workers	0.103	(0.474)	0.858	(1.208)	-0.072	(0.735)	-1.076	(0.814)	-0.203	(0.699)
Service and Sales Workers	0.610*	(0.364)	2.338	(1.586)	0.916	(0.571)	0.434	(0.569)	1.036	(0.764)
Craft Workers	-0.006	(0.434)	-0.010	(1.102)	0.197	(0.569)	-0.061	(0.641)	-0.068	(0.780)
Operators and Assemblers	0.625*	(0.345)	2.078	(1.352)	0.986*	(0.509)	0.145	(0.529)	-0.041	(0.745)
Professionals										
Constant	-3.884	(4.669)	-20.007	(15.677)	-11.885	(7.504)	-2.824	(6.731)	-27.105***	(7.726)
Number of observations						7,801				
χ^2						32,166.566				
Log-likelihood						-1,722.00				
AIC						3,743.996				

Panel B: Turnover[†]

Variables	Turnover									
	Pr (Low Job Rewards)/Pr (Non-transition)		Pr (Inconvenient Location)/Pr (Non-transition)		Pr (Lack of Flexibility in Working Hours)/Pr (Non-transition)		Pr (Poor-quality Work environment) / Pr (Non-transition)		Pr (Unfavorable Career prospect)/Pr (Non-transition)	
Female	-1.304***	(0.248)	0.243	(0.424)	-1.239***	(0.366)	-0.800**	(0.313)	-1.415**	(0.628)
Number of Dependent Children	0.059**	(0.027)	0.076	(0.048)	0.063	(0.042)	-0.051	(0.038)	0.051	(0.065)
Individual Age	0.123**	(0.055)	-0.137	(0.089)	0.107	(0.081)	0.029	(0.067)	0.000	(0.132)
(Individual Age) ² /100	-0.165**	(0.065)	0.142	(0.105)	-0.131	(0.096)	-0.032	(0.079)	-0.049	(0.156)
Years of Education	0.101***	(0.020)	0.057*	(0.033)	0.108***	(0.030)	0.126***	(0.026)	0.187***	(0.043)
Establishment Size: 2-9 Workers	-0.478*	(0.245)	-0.432	(0.412)	-0.217	(0.382)	-0.533*	(0.311)	-0.376	(0.628)
Establishment Size: 10-49 Workers	-0.180	(0.175)	-0.348	(0.290)	0.046	(0.285)	-0.191	(0.218)	-0.252	(0.437)
Establishment Size: 50-199 Workers	0.025	(0.124)	-0.203	(0.201)	0.314	(0.224)	-0.038	(0.159)	-0.116	(0.277)
Expected Wage Rate	-3.925***	(0.919)	-0.274	(1.570)	-4.360***	(1.336)	-3.538***	(1.153)	-2.489	(2.345)
Manufacturing	-0.156	(0.099)	-0.520***	(0.180)	-0.665***	(0.158)	0.147	(0.127)	-0.152	(0.239)
Construction	-0.610***	(0.168)	-0.887***	(0.316)	0.700***	(0.214)	-0.172	(0.212)	-0.007	(0.358)
Wholesale and Retail Trade	-0.233***	(0.087)	-0.165	(0.142)	-0.445***	(0.133)	-0.352***	(0.122)	0.043	(0.182)
Executives and Managers	3.254***	(0.710)	0.097	(1.270)	3.277***	(1.034)	3.120***	(0.896)	2.159	(1.805)
Assistant Professionals	1.773***	(0.364)	0.399	(0.655)	2.096***	(0.520)	1.273***	(0.459)	1.375	(0.940)
Clerical Workers	1.338***	(0.275)	0.209	(0.499)	1.032***	(0.397)	0.748**	(0.346)	0.930	(0.709)
Service and Sales Workers	0.730***	(0.153)	1.059***	(0.288)	0.487**	(0.221)	0.462**	(0.198)	0.793**	(0.355)
Craft Workers	1.042***	(0.258)	-0.057	(0.481)	1.060***	(0.363)	0.855***	(0.330)	0.167	(0.652)
Operators and Assemblers	1.003***	(0.219)	0.619	(0.410)	1.035***	(0.313)	0.855***	(0.275)	0.400	(0.552)
Professionals	2.539***	(0.468)	0.535	(0.849)	2.248***	(0.677)	1.825***	(0.593)	1.192	(1.221)
Constant	14.710***	(3.415)	0.999	(5.905)	15.021***	(4.976)	13.448***	(4.307)	7.659	(8.949)
Number of observations					13,401					
χ^2					1,553.609					
Log-likelihood					-16,792.21					
AIC					33,894.413					

[†] Robust standard errors are in parentheses. All models include dummy variables for the survey year.

* $p < .10$; ** $p < .05$; *** $p < .01$; **** $p < .001$: two-tailed test.

The Evolution of New Venture Creation Intention: A Longitudinal Study

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Abstract

Entrepreneurial intentions have been recognised as the most immediate predictor of start-up activity. Consequently, approaches focusing on understanding entrepreneurial intentions and their antecedents have recently become quite popular. However, less attention has been accorded to the intention-behaviour relationship.

This paper is using a longitudinal design to investigate the evolution from intention to behaviour by focusing on two mediating factors: the temporal stability of intentions and the degree of intention formation. The purpose is to highlight cognitive factors favouring this evolution.

The results suggest that two main variables are favouring entrepreneurial intention-behaviour relationship: the initial level of intentions and opportunity identification.

Introduction

The occurrence of the post-modern transition of the 1970s - characterised by a decline in growth rates and a decline in the weight of large organisations as major job creators - brought the importance of entrepreneurship, but also of the venturing individual as a driver of economic and social development, closer to the foreground.

A first phase of the struggle to understand the differences between entrepreneurs and non-entrepreneurs proceeded on the assumption that traits, attitudes and beliefs stay stable before and after the entrepreneurial event. This phase failed, as it was showed that individuals do not behave consistently in diverse situations and across time (Carroll and Mosakowski, 1987).

Approaches that proceed from a cognitive perspective, such as decision-making, learning or perception, have been recently a quite popular response to the failings of the “trait lines”. Amongst those, models focusing on intentions received considerable attention. These present behavioural intentions as the most immediate predictors of performance (Sheeran et al., 1999). The predictive power of behavioural intentions is particularly high when the behaviour in question is rare, hard to observe, or involves unpredictable time lags (Krueger et al., 2000), which is the case of entrepreneurial behaviour.

In entrepreneurial research, intentions have been analysed according to a variety of different, but related, behaviours: growth behaviour, start-up behaviour, venture acquisition behaviour, self-employment orientation, etc. Some other studies refer to entrepreneurial intentions, more globally, as the intention to become an entrepreneur. In this study, “intention” will refer to the target behaviour of starting a business (Krueger, 2000).

Behavioural intentions are found to be predicted by three constructs: attitudes towards behaviour, subjective norms and perceived behavioural control (“PBC”). Attitudes represent the own desire, subjective norms the opinion of important others about starting-up (including

the own will to comply with these opinions), and PBC the perception of one's own abilities to become an entrepreneur.

In entrepreneurship research, the processes underlying intentional behaviour have been extensively investigated and questioned. However, the intention-behaviour relationship has received less attention. With a few exceptions (e.g. Liñán, 2008; Audet, 2004) entrepreneurship researchers indeed focused on the analysis of the relationship between intention and its antecedents; they rarely tried to understand or to validate the link to subsequent behaviour.

In this paper, we suggest to focus on the intention-behaviour relationship, considering intentions as an evolving process. We argue that intentions are not stable and therefore cannot be measured as "discrete snapshots", as is often done in research (Davidsson, 1995).

Taking a dynamic perspective on intentions and their antecedents, this paper aims to identify (cognitive) factors favouring the evolution of intentions.

It is suggested that the evolution from intention to behaviour is mediated by two main factors: the temporal stability of intentions and the degree of intention formation:

- (1) The temporal stability of intentions refers to the persistence of intentions in memory. It has been proposed to be an indicator of intention strength, as more stable intentions result in a stronger relationship with behaviour (Sheeran et al., 1999; Ajzen, 2005). Temporal stability is therefore an antecedent to behaviour (Sheeran and Abraham, 2003).
- (2) The degree of intention formation, which refers to intention intensity, has also been recognised as a mediating factor. Well-formed intentions (high level intentions) have a stronger relationship with behaviour than poorly formed intentions (low level intentions) (Bagozzi and Yi, 1989).

The temporally stable and high-level intentions are therefore much more predictive of the behaviour than simply the existence of behavioural intentions or low level intentions. To understand the intention-behaviour relationship, we suggest to focus on identifying variables underlying the temporal stability of intentions and the development of high level intentions.

We are therefore addressing an important gap in intention-based entrepreneurship research by:

- (i) identifying variables underlying intention stability; and
- (ii) explaining the changes in the degree of intention formation (from low level intention intensity to high level intention intensity).

Temporal stability and intentional behaviour evolution have been measured using a longitudinal design with measures at two time points, separated by an interval of 18 months to three years. As such, we are measuring the effective evolution of perceptions rather than meta-judgments.

This paper is organised in six sections. The first part introduces intentions models and analyses the intention - behaviour relationship. The second part presents the hypotheses. The

third part deals with methodological issues. This is followed by the presentation of the results and the discussion. The final section deals with the implications and future avenues.

1. The intentions model

The following discussion is based on a model borrowed from the social psychology: the “Theory of Planned Behaviour” (Ajzen, 2005), an approach that has become quite popular in the entrepreneurship community during the last decade (Krueger, 1993; Krueger and Carsrud, 1993; Kolvereid, 1996; Boyd and Vozikis, 1994; Fayolle and Degeorge, 2006).

If we consider that our universe contains a large population of individuals who are intrinsically neither entrepreneurs nor non-entrepreneurs (Sarasvathy, 2004), but rather are ready to “shift” from one to the other under certain circumstances, then focusing on entrepreneurial intentions instead of making a comparison between entrepreneurs and non-entrepreneurs provides significant advantages, such as avoiding to identify as determinants of entrepreneurial behaviour those individual characteristics that represent a consequence of entrepreneurial experience. Instead, it focuses on factors that make potential entrepreneurs turn into real entrepreneurs.

Intentions are frequently seen as fundamental to the deliberate human behaviour and represent an individual’s motivation (conscious plan or decision) to make an effort (Conner et al., 1998), and thus indicate how hard people are willing to try in order to perform the behaviour in question (Kolvereid, 1996; Ajzen, 1991). Consequently, they probably represent the most crucial psychological characteristic to help understand the way individuals act (Fayolle et al., 2005).

Applied on entrepreneurship, said Theory of Planned Behaviour captures three motivational factors that influence intentions: the **attitude** towards becoming an entrepreneur, the **perceived behavioural control** (“PBC”) and the **subjective norms** (Ajzen, 2005).

- The first of these three antecedents stands for the attractiveness of starting-up. It reflects the believed positive or negative consequences of becoming an entrepreneur and the evaluation of these outcomes.
- The second motivational factor, the perceived behavioural control, is dealing with control issues, with the perceived ease or difficulty of carrying out firm-creation: wanting to become an entrepreneur is not necessarily sufficient for engaging in business activities, one must believe to be able to perform it. This antecedent is thus a function of the beliefs about existing factors that facilitate or impede the performance of the target behaviour (Ajzen, 2005), such as starting-up.
- Finally, the last driver of intentions in Ajzen’s model is the subjective norm. In the case of entrepreneurial intentions it is representing a person’s perceived social pressure to become an entrepreneur. These perceived normative prescriptions stand for the opinion (approval or disapproval) of reference people on the choice to become an entrepreneur, but also for how much the potential entrepreneur cares about these opinions.

Although there is sound evidence that behavioural tendencies can undeniably be predicted from corresponding intentions, one of the major problems barely taken into account when applying intention models on entrepreneurship research remains the stability of intentions. The **stability of intention** over time had been recognised as a key index of

intention strength (Sheeran and Abraham, 2003), which means that intention stability is the main mediator in the intention - behaviour relationship. The temporal stability of intentions is particularly influential on behaviours that are difficult to attain and whose implementation takes time and effort. Also, the more time passes since the observation of intentions, the higher the probability that unforeseen events corrupt these intentions (Ajzen, 2005).

Another factor influencing the intention - behaviour relationship is the degree of **intention formation**, which refers to the extent to which intentions are well-formed. “Well-formed” intentions correspond to a high level of the intended behaviour and “ill-formed” intentions correspond to low-level intentions. Bagozzi and Yi (1989) suggested that the degree of intention formation is mainly influenced by the degree to which the intended behaviour is well reflected. The more an individual thinks about a specific behaviour, the higher the degree of his intention formation.

2. Hypotheses

This paper investigates the intention - behaviour relationship, attempting to identify the mechanisms that favour the evolution from intention to behaviour. To this end, two main mediators that influence this relationship will be analysed:

- (1) intention stability; and
- (2) the degree of intention formation.

The objective is to highlight factors favouring the stability of entrepreneurial intention and the evolution of the degree of intention formation.

The factors analysed here concern the evolution of perceptions (particularly the perception of the antecedents of entrepreneurial intention) and the impact of opportunity identification.

The hypotheses are structured as follows: first, the predictive power of entrepreneurial intention is questioned; second, factors influencing the stability of intentions are analysed; and third, variables that may impact the degree of intention formation are investigated.

The predictive power of intentions

Meta-analyses investigating the link between intentions for diverse behaviours reported overall correlation circling around 0.5 (Sheeran, 2002). Entrepreneurial intentions have been highlighted as the main predictor for business start-up. Krueger et al. (2000) suggested that intentions explain 30 percents or more of the variations in behaviour. We can then assume that:

Hypothesis 1: at least 30% of those who really intended (high intensity intention) to start a business 18 months before the second data collection did it.

It has been argued that high-level intentions have a stronger relationship with behaviour than poorly formed intentions. We expect therefore that few or none of those who had ill-formed intentions in 2007, started a business 18 months later. We can therefore suppose that:

Hypothesis 2: ill-formed intentions are not correlated with entrepreneurial behaviour (all of those who started a business were intensively intending to do so 18 months before).

The stability of intentions

General research dealing with intentions (e.g. Sheeran et al., 1999) has found that the stability of intentions plays a significant role in explaining the relationship between intentions and behaviour.

This link, however, might be quite different when the level (intensity) of intentions is taken into account. When considering the degree of intention formation, evidence has been found that ill-formed intentions are expected to be less stable over time. Bagozzi and Yi (1989) argue that poorly formed intentions have a greater chance than well-formed intentions to undergo changes due to differential retrieval, due to the forgetting of the information on which the intentions are based or due to a susceptibility to situational factors. Applied to this paper, we can expect that:

Hypothesis 3: ill-formed intentions are less stable than well-formed intentions.

Well-formed intentions (high intensity) are therefore expected to be stable over time, because of the level of thoughts given to the behaviour required for its development. Bagozzi and Yi (1989) argue that well-formed intentions are always based on a deep thought given to the behaviour and on the consideration of the possible pros and cons of that behaviour. Well-formed behavioural intentions are therefore well reflected, which make them more stable over time.

Hypothesis 4: well-formed intentions are stable over time.

Comparing entrepreneurial behaviour to other intentional behaviours investigated in psychology research suggests some differences related to the fact that business start-up is not a single act. It is rather the result of a process of trying to achieve a final end. It requires actions related to a three steps process: (i) actions for opportunity identification, (ii) actions for opportunity exploration and (iii) actions for opportunity exploitation (Shane and Venkataraman 2000).

Intentional behaviour research has shown that intentions cause the related behaviour (see hypothesis 1), but some argue that reciprocal causation exists, as the behaviour also causes attitudes (Kelman, 1974). It can therefore be suggested that performing actions in each step of the entrepreneurial process (opportunity identification, exploration and exploitation) may cause changes in attitudes that may affect the stability of the entrepreneurial intentions. A successful opportunity identification, leading to a positive evolution of attitudes and therefore stabilizing the intentions, should nevertheless see a negatively influenced entrepreneurial intention if at least one opportunity cannot be identified within a 18 months time period. The following hypothesis can therefore be suggested:

Hypothesis 5: well-formed intentions stability is positively correlated with opportunity identification.

The Degree of entrepreneurial formation evolution

As assumed before, ill-formed intentions are expected to change over time. The change from ill-formed to well-formed intentions can be interpreted as an orientation to the entrepreneurial behaviour, as the individuals with the strongest intent to start up a business also have the highest probability to do it (see hypothesis 2).

To understand the intention - behaviour relationship, we therefore suggest to identify variables underlying the development of high-level intention. To this end, two main variables are questioned:

- (1) the evolution of the perceptions, and more specifically the perceptions of the antecedents of entrepreneurial intention; and
- (2) the opportunity identification factor.

The evolution of perceptions

Generally speaking, the Theory of Planned Behaviour states that attitudes towards behaviour, perceived feasibility and subjective norms should be sufficient to predict intentions. Ajzen and Fishbein (2004) suggested however that the relative importance of each of these three antecedents might vary depending on the specific application. Also, it is argued that changes to the perception of feasibility and/or desirability should lead to changes in intentions (Krueger & Brazeal 1994; Krueger 2000; Krueger, et al. 2000). In our context this implies that one or the other factor may be more important for the evolution of intentions. Overall we can therefore expect that:

Hypothesis 6: the favourable attitude toward entrepreneurship is positively correlated with the evolution of entrepreneurial intention.

Hypothesis 7: the evolution of subjective norms is positively correlated with the evolution of entrepreneurial intention.

Hypothesis 8: the level of perceived feasibility is positively correlated with the evolution of entrepreneurial intention.

Opportunity identification

As stated before, the opportunity identification may influence the level of entrepreneurial intentions.

Hypothesis 9: identifying an opportunity is positively correlated with the evolution of entrepreneurial intentions.

3. Research design and Procedure

The data was gathered, through a structured questionnaire, in two waves administered in an interval of 18 months. The first collection (“time one”) took place in October 2007 and the second one in March 2009 (“time two”).

Procedure

The time one data collection was carried out in collaboration with an entrepreneurship centre, which was organizing an entrepreneurship seminar aiming at fostering new venture creation. The questionnaire was administered through the seminar web site and could be filled in by potential participants to the seminar. The questionnaire was removed from the web site a few hours before the start of the seminar.

18 months later, a web link to the same questionnaire was administered via e-mail to the respondents of the first wave. This second data collection was conducted fully independently from the aforementioned entrepreneurship centre.

Subjects

Eight hundred and five (805) individuals participated in the first wave of the study, which was described to them as a research project on entrepreneurial intentions and attitudes, conducted independently from the entrepreneurship seminar. This sample is mainly composed of students (86 percents). Its average age is 22.67 years and it is composed of 59 percents of men and 41 percents of women.

In the second wave of the study, one hundred and nine (109) participants to the first wave responded to the online questionnaire. This sample is still mainly composed of students (79 percents). The average age of the sample is 25.65 years and it contains more men (57 percents) than women (43 percents).

Measures

Theory-driven measures of entrepreneurial intention, attitude towards entrepreneurship, perceived feasibility and subjective norms have been adopted.

Entrepreneurial intention has been evaluated based on the probability attributed by the respondent to the fact that he would start his own business (seven-points Likert scale ranging from “extremely improbable” to “very probable”).

Attitudes were measured by using one item: “is starting your own business an attractive idea to you?” (seven-points Likert scale ranging from “not attractive at all” to “very attractive”).

Perceived feasibility was measured using one item: “if you have to do it, how capable do you feel of starting your own business?” (seven-points Likert scale ranging from “not capable at all” to “totally capable”).

Subjective norms were measured according to the perception of what important people in the live of the respondent think about their engagement in a business start-up. Respondents were asked to rate their perception of the opinion of (i) their family, (ii) their friends, (iii) their professors and (iv) other important people in their lives (seven-points Likert scale ranging from “extremely unfavourable” to “extremely favourable”).

To check construct validity, subjective norms are weighted by the strength of the motivation of the respondents to comply with them. This motivation was measured by using the item: “in the decision to start your own business, how important are for you the opinions of (i) your family, (ii) your friends, (iii) your professors and (iv) other important people in

your life?” (seven-points Likert scale ranging from “not important at all” to “extremely important”).

As a variable that may impact the stability or the evolution of entrepreneurial intention, **opportunity identification** was measured according to the ability of the respondents to identify at least one interesting business idea during the measurement interval. Respondents were asked to specify if “they have, since 2007, identified one or more business ideas that seems to be interesting for them”. Respondents could choose between “yes”, “no” or “I don’t remember”.

Analysis

In order to test our hypothesis, the sample was split in two sub-groups according to the initial level of entrepreneurial intention (i.e. the one measured at time one):

- Group 1 corresponds to high-level intentions (well-formed intentions) and is formed by individuals whose entrepreneurial intention ranges from 4 to 7. Those individuals are qualified as being “*hot*” on performing an entrepreneurial behaviour.
- Group 2 corresponds to low-level intentions (ill-formed intentions) and is formed by individuals whose entrepreneurial intention ranges from 1 to 3. Those individuals are qualified as being “*cold*” on performing an entrepreneurial behaviour.

The analysis concerning the evolution or the stability of entrepreneurial intention has been considered for each subgroup separately. The temporal stability is considered for subgroup 1, if the *hots* remain *hots*. The same is considered for subgroup 2, if the *colds* remain *colds*. In line with this reasoning, the intention evolution is considered to be negative for subgroup 1, if the *hots* turn into *colds*. Similarly, the evolution of intention is positive, if the *colds* turn into *hots* (see Table 1).

Table 1 • Subgroups of intention evolution.

	Well-formed intentions in 2009: the “hot in 2009”	Ill-formed intentions in 2009 the “cold” in 2009
Well-formed intentions in 2007: the “hot in 2007”	Temporal stability of intentions	Negative evolution of intentions
Ill-formed intentions in 2007 the “cold” in 2007	Positive evolution	Temporal stability of intentions

The method applied in this study is a *repeated measures t-test for dependent samples*.

The t-test is the most common method when it comes to the evaluation of average differences between two groups. These groups may be independent (e.g. measuring blood pressure of individuals receiving medication versus a control group getting a placebo) or dependent (e.g. measuring the blood pressure of the same individuals before and after receiving a medication).

The t-test for dependent samples is used when the two groups of measures to be compared are based on the same observation sample (e.g. subjects) tested twice (for instance before and after having taken part to an event). In this case, it is possible to only look at the differences between the two measures (“before the event” and “after the event”) *for each individual*. Through subtraction of the first result from the second for each individual, then

through an analysis limited to those “pure differences” (in couple), we eliminate from our data the part of the dispersion which is due to the difference of level between the various individuals. This is exactly what the t-test for dependent samples is doing.

Compared to the t-test for independent samples, it always produces “better” results (that is to say that it will always be more sensitive and hence more reliable).

4. Results

The predictive power of intentions

Hypothesis 1: at least 30% of those who really intended (high intensity intention) to start a business 18 months before the second data collection did it.

The sample contains 75 individuals that had well-formed intentions in 2007. From this sample of “hots”, only 6 respondents have started a business between 2007 and 2009 (see Table 2). This rate is significantly lower than what we expected. The first hypothesis was then not supported, as less than expected people had performed entrepreneurial activities.

Table 2 • The predictive power of entrepreneurial intentions.

Well-formed intentions in 2007: the “hot in 2007”	Started-up between 2007 and 2009: the “hot” who did it	Percentage of the “hot in 2007” who created a business
75 individuals	6 individuals	8 percent

Those results can be related to two main reasons:

- **The period between the two measurements:** it can be assumed that 18 months was not enough time for the entrepreneurial intention to be implemented. However, our results and findings are in line with recent longitudinal studies on entrepreneurial intention. (Liñán et al., 2008). During a 36 months follow-up made on a comparable population in Spain (Liñán et al. 2008), around 8.1 percents were making the transition. This seriously suggests that the so far used intervals in longitudinal studies focusing on entrepreneurial intentions are significantly too short to allow the confirmation of the predictive power of entrepreneurial intentions on behaviour.
- **The age of the sample:** the average age of the sample is 25 years and mainly includes students. When looking at the statistics on the average age of an individual at the time of venture creation in the Western World, students are statistically seen still far away from that point. In addition, more educated individuals tend to create later than less educated ones (Montes-Rojas et al., 2008). This reasoning suggests that we cannot expect from our sample to have the same level of entrepreneurial activity as the average population. Even if the level of their entrepreneurial intention is relatively high (68 percents of our sample had well formed intention in 2007), it cannot be expected to turn to entrepreneurial behaviour on the short time. It could, however, be expected that the more they are approaching the mid-thirties, the more probable the transition from intention to actual behaviour becomes.

Hypothesis 2: ill-formed intentions are not correlated with entrepreneurial behaviour (all of those who started a business were intensively intending to do so 18 months before).

As all those individuals who started a business (n=6) from 2007 to 2009 were “hot” in 2007, the second hypothesis has found support.

These results confirm the mediating impact of the degree of intention formation on the intention - behaviour relationship. Even more, these results suggest that no entrepreneurial behaviour can be observed without well-formed intentions 18 months before. In this context, a high degree of entrepreneurial formation can therefore be considered to be more of a necessary step in the entrepreneurial intention - behaviour relationship, than a mediating factor.

The stability of intentions

Hypothesis 3: ill-formed intentions are less stable than well-formed intentions.

Hypothesis 4: well-formed intentions are stable over time.

We found that 92 percents of the individuals stating high-level intentions (“hots”) in 2007 did still express the same intentions in 2009. This confirms our fourth hypothesis. On the other hand, the “cold” group, expressed, as expected, significantly lower levels of intention stability. This confirms our third hypothesis.

Table 3 • The stability of intentions

Initial level of intention (2007)	Current level of intention (2009)	
	Hots (n=93)	Colds (n=16)
Hots (n=75)	92%	8%
Colds (n=34)	71%	29%
All groups	85%	15%

Thus, hypothesis 3 and 4 found considerable support. The results indeed give support for the notion that well-formed intentions (the “hot” group) are quite stable over time while the ill-formed intentions (the “cold” group) may change over time. The reasons behind this change find their justification in the relation between the degree of intention formation and the degree of reflection about the intended behaviour. Bagozzi and Yi (1989) suggested that ill-formed intentions are related to low reflection about the intended behaviour. The less an individual thinks about a specific behaviour, the lower the degree of intention formation. It can therefore be expected that individuals who have reflected about the entrepreneurial career option and intended to do it (the “hot” ones) will less probably change their perceptions, while individuals who were hesitating about their opinion concerning an entrepreneurial career (the “colds” ones) are more likely to change their mind and to consider, 18 months later, an entrepreneurial career option.

These results suggest that further investigations on the reasons behind ill-formed intentions changes may lead to valuable insight about the intention - behaviour relationship. Some of these investigations are suggested in the present paper under the section “the evolution of intention”.

On the same line of reasoning, reasons behind well-formed intention stability are also of major interest as the stability of intention is mediating the intention - behaviour relationship.

As a probable factor influencing the stability of well-formed intention, opportunity identification ability is questioned through the following hypothesis:

Hypothesis 5: well-formed intentions stability is positively correlated with opportunity identification.

The results are presented in the following table:

Table 4 • Well-formed intention and opportunity identification.

	Well-formed intentions		p<0,10	p<0,05
	2007	2009		
Identified at least one business idea since October 2007 (n=48)	5.1667	5.2292		
Did not identify a business idea since October 2007 (n=27)	4.5714	3.8095	*	

Results concerning the evolution of the intention of the *hot* group support the fifth hypothesis. While individuals who identified a business idea (64 percents of the hot group) maintained their entrepreneurial intention at a high level, those who identified no business idea have experienced a negative evolution of their entrepreneurial intention.

Entrepreneurial opportunity identification ability is therefore confirmed as a factor influencing the stability of well-formed intentions.

The evolution of entrepreneurial intentions

As shown before, 71 percents of those who had low-level intention in 2007 (the *cold* category) have turned to well-formed intentions. The reasons behind this evolution are investigated under this section. Two main reasons are questioned: (i) the evolution of perceptions (attitudes, perceived feasibility and subjective norms) and (ii) the opportunity identification ability.

The evolution of perceptions

As the Theory of Planned Behaviour states that attitudes towards behaviour, perceived feasibility and subjective norms sufficiently predict entrepreneurial intentions, this section aims to highlight which of these factor evolution explains the best the evolution of the intentions:

Hypothesis 6: the favourable attitude toward entrepreneurship is positively correlated with the evolution of entrepreneurial intention.

Table 5 • Attitudes towards entrepreneurship evolution according to the evolution of intentions

	Attitudes towards entrepreneurship		p<0,10	p<0,05
	2007	2009		
Positive evolution of intentions (from "cold" to "hot")	4.8333	5.3333	*	
Negative evolution of intentions (from "hot" to "cold")	5.7765	5.5412	*	

Results show no significant evolution of the attitudes toward entrepreneurship, neither for those who expressed a positive evolution of their intentions (from "cold" to "hot"), nor for those who expressed a negative evolution de their entrepreneurial intentions (from "hot" to "cold"). The sixth hypothesis is therefore *not* supported.

These findings suggest that attitudes towards becoming an entrepreneur cannot be held responsible for the positive (nor for the negative) evolution of the intentions. The reasons behind the evolution of intention are therefore to be found elsewhere (e.g. perceived feasibility or subjective norms changes, see hypothesis 7 and hypothesis 8)

However, a possible explanation of the stability of attitudes is probably related to the age of the sample. Lots of research on life cycle point out that attitude changes are mainly related to the maturity of individuals. Attitudes change as the individual matures (e.g. Visser and Krosnick, 1998, Krosnick and Alwin, 1989). Theories, such as the life-stage hypothesis, predict a high plasticity of core attitudes during early adulthood. These variations are associated with multiple role transitions. These transitions may alter the perception of the world, and thus, undermine the justifications that strengthen the current attitudes (Visser and Krosnick, 1998). In a relatively short time frame, as it is the case for our study (18 months), and given the quite young age of the sample, a high quantity of role transitions (beside entering the working force) is not to be expected. Other factors that may impact the attitude change are some important events like "marriage" or "becoming parent". Given the age and the social status of our sample (an average of 25 years and a majority of students), we expect that these events were quite rare amongst the analysed population. Thus, the major reason that may change attitudes is not expected to have happened.

When it comes about subjective norms, there was no evidence that a positive evolution of subjective norms favoured a positive evolution of entrepreneurial intentions. In the group which moved from ill-formed intentions to well formed intentions (from "cold" to "hot"), there was no significant evolution of their perception of the opinion of their family, friends, professors or other important people for them about having them start a business. Hypothesis 7 has, therefore, *not* found support.

However, when comparing the group who moved from "cold" to "hot" to the rest of the sample, it seems that the stability of their subjective norms is an exception. While the subjective norms of the rest of the sample dropped significantly, the subjective norms of the group who experienced a positive evolution of their entrepreneurial intention remained stable. These findings suggest that if the positive evolution of entrepreneurial intentions cannot be related to positive evolution of subjective norms, it can however be explained by the stability of these perceptions.

Table 6 • The relationship between subjective norms and the evolution of intentions

	Subjective norms		p<0,10	p<0,05
	2007	2009		
Positive evolution of intention (from "cold" to "hot")				
Opinion of the family	4.9167	5.0417		
Opinion of friends	5.3750	5.2917		
Opinion of the professors	5.1250	5.2500		
Opinion of important others	5.4583	5.3750		
Importance of the families opinion	5.0417	5.0000		
Importance of friends opinion	4.5417	4.9167		
Importance of the professors opinion	4.7083	4.1250	*	
Importance the opinion of important others	5.2083	5.2500		
No or negative evolution of intentions				
Opinion of the family	5.6588	5.0118	*	**
Opinion of friends	5.9059	5.3882	*	**
Opinion of the professors	5.7952	5.2706	*	**
Opinion of important others	5.8000	5.3059	*	**
Importance of the families opinion	5.1071	5.2262		
Importance of friends opinion	4.7143	4.8571		
Importance of the professors opinion	4.7108	4.2381	*	**
Importance of the opinion of important others	5.3690	5.4286		

Hypothesis 8: the level of perceived feasibility is positively correlated with the evolution of entrepreneurial intention

On the other hand, the analyses of the impact of perceived behavioural control on the positive intentions evolution delivered a challenging insight. The evolution of perceived feasibility is significantly and positively correlated with the evolution of entrepreneurial intentions. Hypothesis 8 is therefore finding support.

Table 7 • The relationship between perceived behavioural control and the evolution of intentions.

	Perceived feasibility		p<0,10	p<0,05
	2007	2009		
Positive evolution of intention (from the "cold" to the "hot")	4.2174	4.8696	*	**
No or negative evolution	5.1071	5.2381		

These results confirm the findings of other studies, which reveal that higher levels of perceived behaviour control positively impacts entrepreneurial intentions. The most recent one is a study conducted with a sample of students where feasibility perceptions were held responsible for the changes of intentions (Liñán, 2008). In this study, it was reasoned that the changes in feasibility perceptions are linked to increased working experience. Having such a limited amount of work experience like the samples analysed so far in these kind of studies puts up the question, of whether the positive correlation between perceived behavioural

control and entrepreneurial intention in these cases is really the result of the work experience or if some other factor is hiding behind it.

Let's picture a bit the situation of the analysed population of the mentioned short-time follow-ups: moving proudly into a company with a "fresh" university diploma under the arm, the new employee fast realizes that quite a bit is missing (ref on 1st job and uni prep) to move up on the career ladder and to gain a higher status (find ref). This doesn't necessarily translate in having more trust in his own abilities in the short run. In addition, the development of expert skills does take longer (find ref). Also, nobody will provide someone access to more financial resources because of one or two years of working experience. What might then explain, that studies so far confirmed that already a short time after entering workforce, the individuals perceived being more capable of running a business?

In a first step we analysed the link between the evolution of the antecedents of entrepreneurial intention and the positive evolution of entrepreneurial intentions. We found support for higher levels of PBC (hypothesis 8) and for the stability of subjective norms.

On the following step, we investigated (more than perceptions) the influence of concrete accomplishments on the evolution of entrepreneurial intention. The opportunity identification ability is therefore questioned.

Hypothesis 9: identifying an opportunity is positively correlated with the evolution of entrepreneurial intentions.

Results show a positive and significant evolution of entrepreneurial intentions of the "cold" population (those of with ill-formed intentions in 2007) who identified at least one business idea since 2007. It turned out that having identified a business opportunity is positively correlated with an evolution of the entrepreneurial intentions. Hypothesis 9 is thus supported.

Table 8 • The evolution of intentions and the identification of business opportunities.

	Ill-formed intentions		p<0,10	p<0,05
	2007	2009		
Identified at least one business idea (n=16)	2.6875	4.6875	*	**
Identified NO business idea (n=16)	2.1250	2.9375	*	

According to the previous analysis, it seems that the main variables influencing the positive entrepreneurial intention evolution are: higher PCB and opportunity identification. The first question that comes in mind is how those variables are influential? Is opportunity identification influencing directly intention evolution or is the PBC a mediating factor in this relationship?

To answer this question, the relation between opportunity identification and a positive PBC evolution was questioned in the subgroup of those with ill-formed intentions ("colds") as well as in the subgroup of those with well-formed intentions ("hots"). The results are presented in the following table.

Table 9 • Intention, business idea and perceived behavioural control.

	PBC		p<0,10	p<0,05
	2007	2009		
Ill-formed intentions group (in 2007)				
Identified at least one business idea (n=16)	4.0625	5.2000	*	**
Identified NO business idea (n=16)	3.8750	3.9375		
Well formed intentions group (in 2007)				
Identified at least one business idea (n=48)	5.3617	5.6809	*	**
Identified NO business idea (n=21)	5.0952	4.6667		

The results suggest that the opportunity identification is positively and significantly correlated with the evolution of PBC and this, independently of the initial level of entrepreneurial intentions.

We can therefore conclude that opportunity identification - higher level intention relationship could be mediated by higher level of PBC.

If working experience would be the reason behind better PBC in the studies analysed so far, than all of these groups are expected to express changes in the PBC as they were all at the same stage of their career and with the same amount of working experience. This was clearly not the case. Only those groups who had identified an idea expressed higher levels of perceived behavioural control. For those groups who did not identify opportunities, the level of PBC remained the same.

Thus, in the short run these results would suggest that the exposure to the working environment favours the development of higher levels of PBC, by helping to identify a business idea. First, one was able to spot a valuable idea. Second, it is always easier to imagine how to realize a concrete project instead of having a vague, foggy idea. This should augment the perceived feasibility of the identified opportunity and by that of becoming an entrepreneur. Consequently, hypothesis 9 is confirmed.

5. Conclusion and discussion

The purpose of this study is to highlight factors influencing the entrepreneurial intention - behaviour relationship. To this end, variables influencing the stability of entrepreneurial intention and the degree of intention formation were questioned. In doing so, we rely on social psychological research, which confirms the mediating effect of (i) the stability of intention and (ii) the degree of intention formation in the intention - behaviour relationship.

The mediating effect of a high-level intention on the entrepreneurial behaviour could be verified as no business start-up activity was related to ill-formed intentions. However, the mediating effect of the stability of the intentions could not be verified as we have measures at only to two points in time. We could therefore not conclude about the predictive power of the stability of intentions.

In addition, the predictive power of the intentions on the behaviour was questioned for the total sample. The result showed that the predictive power of intentions was lower than expected. Less people than presumed had performed entrepreneurial activities (8% of the

respondents started a business). These results questioned the representative value of our students' sample and the distance of our data to those gathered on less homogeneous populations with a higher average age. The adequacy of the time period measurement was also questioned. 18 months are probably not enough for intentions to be transformed in entrepreneurial behaviour.

Among the variables that influence the stability of intentions, the degree of entrepreneurial intention was highlighted as an influencing variable. Only the well-formed intentions remained stable over time. This could be explained by the degree of reflection about the intended behaviour required for the formation of high-level intentions. The stability of intentions, and consequently the intention - behaviour relationship can, therefore, be influenced by the degree to which individuals think about the pros and cons of the business start-up.

Opportunity identification ability has also been highlighted as an influencing factor of the stability of well-formed entrepreneurial intentions as those individuals who didn't identify a business opportunity during the 18 months period got discouraged from performing the entrepreneurial behaviour.

As to the variables that influence the evolution of entrepreneurial intentions (from low-level intention to high-level intention), the impact of the (positive or negative) evolution of each antecedent of the intention was questioned. The results concerning individuals who had moved from low-level intentions in 2007 to high-level intentions in 2009, suggested no evolution of their attitudes towards entrepreneurial activity, a negative evolution of their subjective norms and a positive evolution of their perceived behavioural control.

The evolution of the perceived behavioural control was therefore the main influential perceptual variable predicting the evolution of entrepreneurial intention.

Opportunity identification had also a strong impact on the degree of entrepreneurial intention formation as perceiving an interesting business idea boosts the ill-formed entrepreneurial intentions and transforms them into well-formed intentions.

6. Implication and further research

The present study suggests some implications for entrepreneurship education purposes.

First, research should have a less static perception of entrepreneurial intentions and turn its attention towards how to favour the stability of well-formed intentions and how to develop higher degrees of entrepreneurial intentions as they are the main issues for the implementation of entrepreneurial intentions.

Secondly, we suggest influencing the intention – behaviour relationship by:

- favouring the reflection about the possible consequences of entrepreneurial activity.
- encouraging activities based on the exposure of role models as these are known for their positive impact on perceived behavioural control.
- encouraging an entrepreneurial culture in the universities and maintaining the students' perception of the high opinion of their relatives (or at least their friends) concerning their engagement in an entrepreneurial career.

- helping students to identify interesting business ideas. Identifying a business idea may foster their low-level entrepreneurial intention or maintain their well-formed entrepreneurial intentions stable.

However, activities aiming to foster entrepreneurial attitudes should be suppressed, as we can't expect changes in attitudes amongst students of this young age.

We strongly advocate for more longitudinal research on the evolution of entrepreneurial intentions in the future and suggest a careful selection of the sample in order to avoid the limits pointed out in our study.

- Thus, more longitudinal studies based on non-student populations are required to allow an external validity of the results obtained in longitudinal studies analysing the evolution of entrepreneurial intentions of students.
- The closer the average age of the sample is to the average age of an individual at the venture creation (mid-thirties), the more it will allow analysis about the realisation of entrepreneurial intentions.
- A three points in time measurement is also preferable, as it would allow exploiting the full power of the longitudinal entrepreneurial intention model.

Bibliography

Ajzen, I. (2005), "Attitudes, Personality and Behaviour", Open University Press, Maidenhead

Ajzen, I. (1991), "The Theory of planned behaviour", *Organizational Behaviour and Human Decision Process*, Vol. 50, pp. 179-211

Ajzen, I., Fishbein, M. (2004), "Questions raised by a reasoned action approach: Comment on Ogden (2003)", *Health Psychology*, Vol. 23, pp. 431-434

Aouni, Z., Pirnay, F. (2009), "L'impact de l'exposition à des modèles d'entrepreneurs sur l'intention entrepreneuriale et ses antécédents", *Actes du 6ème Congrès l'Académie de l'entrepreneuriat*

Audet, J. (2004), "A Longitudinal Study of the Entrepreneurial Intentions of University Students", *Academy of Entrepreneurship Journal*, Vol. 10, Issue 1, pp. 3-15

Bagozzi, R. P., Yi, Y. (1989), "The Degree of Intention Formation as a Moderator of the Attitude-Behaviour Relationship", *Social Psychology Quarterly*, Vol. 52, Issue 4, pp. 266-279

Boissin, J.-P., Emin, S. (2007), "Les étudiants et l'entrepreneuriat: l'effet des formations", *Gestion 2000*, Vol. 24, Issue 3, pp. 25-42

Boyd, N. G., Vozikis, G. S. (1994), "The influence of self-efficacy on the development of entrepreneurial intentions and actions", *Entrepreneurship: Theory and Practice*, Vol. 18, Issue 4, pp. 63-77

Carroll, G., Mosakowski, E. (1987), "The career dynamics of self-employment", *Administrative Science Quarterly*, Vol. 32, pp. 570-89

Conner, M., Armitage, C. J. (1998), "Extending the Theory of Planned Behaviour: A Review and Avenues for Further Research", *Journal of Applied Social Psychology*, Vol. 28, Issue 15, pp. 1429-1464

- Davidsson, P. (1995), "Determinants of Entrepreneurial Intentions"; *Paper prepared for the RENT IX Workshop*, Piacenza, Italy
- DeGeorge, J. M., Fayolle, A. (2008), "Is Entrepreneurial Intention Stable Through Time? First Insight from a Sample of French Students", *Int. J. Entrepreneurship and Small Business*, Vol. 5, Issue 1, pp. 7-27
- Fayolle, A., DeGeorge, JM, (2006), "Attitudes, intentions and behaviour: new approaches to evaluating entrepreneurship education" In *International Entrepreneurship Education: Issues And Newness*, Fayolle A. and Klandt, H., Edward Elgar Publishing
- Fayolle, A., Gailly, B., Lassas-Clerc, N. (2006), "Mesure de l'effet à court terme et à long terme d'un programme d'enseignement de l'entrepreneuriat (PEE) sur l'intention entrepreneuriale des participants: importance des conditions initiales", *Actes du 8ème Congrès International Francophone en Entrepreneuriat et PME, Suisse*
- Fayolle, A., Kyrö, P., Ulijn, J. (2005), "Entrepreneurship Research in Europe", Edward Elgar Publishing, Cheltenham
- Kelman, H. C. (1974), "Attitudes are alive & well & gainfully employed in the sphere of action", *American Psychologist*, Vol. 29, Issue 5, pp. 310-324
- Kolvereid, L. (1996), "Organizational employment versus self-employment: reasons for career choice intentions", *Entrepreneurship: Theory and Practice*, Vol. 20, Issue 3, pp. 23-31
- Krueger, N. (2000), "The cognitive infrastructure of opportunity emergence", *Entrepreneurship: Theory and Practice*, Vol. 24, Issue 3, pp. 5-23
- Krueger, N. (1993), "Impact of prior entrepreneurial exposure on perceptions of new venture feasibility and desirability", *Entrepreneurship: Theory and Practice*, Vol. 18, Issue 1, pp. 5-21
- Krueger, N., Brazeal, D. (1994), "Entrepreneurial potential and potential entrepreneurs", *Entrepreneurship: Theory and Practice*, Vol. 18, Issue 3, pp. 91-104e
- Krueger, N., Carsrud, A. (1993), "Entrepreneurial intentions: Applying the theory of planned behaviour", *Entrepreneurship and Regional Development*, Vol. 5, pp. 315-330
- Krueger, N. F., Reilly, M. D., Carsrud, A. L. (2000), "Competing models of entrepreneurial intentions", *Journal of Business Venturing*, Vol. 15, Issue 5/ 6, pp. 411-432
- Liñán, F., Rodríguez-Cohard, J. C., Guzmán, J. (2008), "Temporal Stability of Entrepreneurial Intentions: A Longitudinal Study", 4th European Summer University Conference on Entrepreneurship, Bodø Graduate School of Business and Nordland Research Institute, 22nd to 26th August 2008, Bodø, Norway
- Montes-Rojas, G. V., Siga, L. (2008), "On the Nature of Micro-Entrepreneurship: Evidence from Argentina", *Applied Economics*, 99999:1
- Sarasvathy, S. (2004), "The question we ask and the questions we care about: reformulating some problems in entrepreneurship research", *Journal of Business Venturing*, Vol. 19, Issue 5, pp. 707-717
- Shane, S., Venkataraman, S. (2000), "The promise of entrepreneurship as a field of research", *Academy of Management Review*, Vol. 26, Issue 1, pp. 217-226

Sheeran, P. (2002), "Intention-behaviour relations: A conceptual and empirical review". In W. Stroebe and M. Hewstone (eds.), *European Review of Social Psychology* (Vol. 12, pp. 1-36), Chichester: Wiley

Sheeran, P. Abraham, C (2003), "Mediator of Moderators: Temporal Stability of Intention and the Intention-Behavior Relation", *Personality and Social Psychology Bulletin*, Vol. 29, pp 205 – 215

Sheeran, P. Orbell, S., Trafimow, P. (1999), "Does the temporal stability of behavioral intentions moderate intention-behavior and past behavior?", *Personality and Social Psychology Bulletin*, Vol. 25, pp. 724-734

Micro-macro dynamics in the entrepreneurial process: Small business and institutional constraints in a developing country rural setting

Jakob Lauring, Toke Bjerregaard and Charlotte Jonasson

Abstract

In this article we show the relevance of classic and new anthropologies of social process for shedding new light upon entrepreneurship. While there has been a movement towards conceiving of entrepreneurship as a socially-dynamic process in the entrepreneurship literature, entrepreneurship studies seldom integrate the macro societal context into the account of micro agency. The purpose of this article is to examine, how anthropological perspectives may serve to provide an integrative account of entrepreneurship as a dynamic social process unfolding between micro entrepreneurial agency and macro institutional dynamics. To illustrate this, we use cases from an ethnographic field study on entrepreneurial processes that influences and draws upon institutional changes. We conclude by outlining implications of the anthropologies of entrepreneurial process for entrepreneurship research.

Keywords: entrepreneurial process; anthropology; institutionalism; agency; social process; institutional entrepreneurship; social change

Introduction

Since Bygrave and Hofer (1991) suggested to change the focus of the research in entrepreneurship away from a sole focus on the entrepreneur to a focus on the entrepreneurial process, the agenda of the research community has gradually changed in that direction.

Much research on the entrepreneurial process has perceived it in a *micro perspective* of individual cognition (Baron, 2004). Following this, a mainstream conception has developed, seeing the entrepreneurial process as a gradual, stage driven cycle that provides hints about opportunities, actions, problems, and successes, as the venture progresses through stages from the initiation of the idea to the sustainable business venture (Bhave, 1994). These stage models, however, have been met with critique for being built more or less on linear dependencies and for their simplistic image of the entrepreneurial process, including a lack of contextual reflections (Bouncker, 2004). Accordingly, in their review of research contributions on the entrepreneurial process,

van der Veen and Wakkee (2003) conclude that there is a need for more studies on the entrepreneurial process in a contextual perspective. Shane (2003) also concludes that a more dynamic perspective on the entrepreneurial process is required.

The purpose of the present article is to show how anthropological perspectives may serve to further stretch and extend theories on entrepreneurship as a socially-dynamic process embedded in wider institutional spheres, which it may serve to both maintain and change. In this article, we argue that to achieve a dynamic view of the entrepreneurial process, including both individual agency and societal constraint, researchers could benefit from contributions from the field of social anthropology (cf. Rosa and Bowes 1992). For half a century, anthropologists have focused on bridging social dynamics at the societal level with the dynamics of individual actions in the entrepreneurial process (Geertz, 1963; Greenfield & Strickon, 1986, 2000; Lindh de Montoya, 2000; Stewart, 1991). Consequently, we argue that new insights can be gained from viewing the entrepreneurial process as dialectical movements which integrates individual or micro-level opportunity creation and wider institutional constraints. In other words, more focus should be put on combining macro and micro perspectives on the entrepreneurial process. Consequently, the research question to guide the study is: *How can anthropological theories provide an integrative account of the entrepreneurial process unfolding between micro agency and macro institutional forces?*

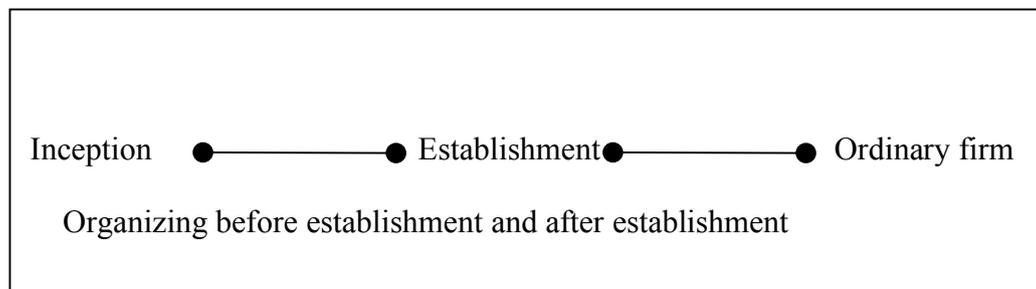
The article is organized in the following way. In the section to come, a short glimpse of the main viewpoints on the entrepreneurial process is presented. This is followed by a section revealing the anthropological methodology, followed by a section presenting a short illustrative case. The article concludes with a discussion of the key theoretical implication and suggests future direction for research.

Literature review: The entrepreneurial process

One of the early exponents for an entrepreneurial process view is Bhava (1994). In his optics, the entrepreneurial process can best be seen as a process of organizing around an evolving idea. A process lasting until the business venture has reached a stage of stable

sustainability and ordinary business management takes over (See also Gartner, 1985). Bhave's view on the organizing process is replicated in figure 1 below.

Figure 1. The entrepreneurial process in a linear perspective



Reference: based on Bhave (1994)

In a later contribution, Shane (2003) interprets the entrepreneurial process as directional and ordered. In his view the process is based on sources of opportunities existing out there waiting to be discovered, exploited, and organized, through entrepreneurial strategies. The focus taken in his contribution summarizes a main stream focus with the nexus between the individual and the opportunity (cf. Shane and Venkataraman 2000).

While Shane (2003), Shane and Venkataraman (2000), Bygrave and Hofer (1991) as well as Bhave (1994) emphasize that activities are organized in stages of the isolated entrepreneurial process, a large number of contributions have expanded on their initial ideas, focusing on the weak spots of their original contributions, namely the role of the entrepreneurial environment. Aldrich and Zimmer (1986) and Johannisson (1988) were probably some of the first to recognize the role of the network engaged by the entrepreneur or influencing the entrepreneurial process. While the vast numbers of studies on social and business networks have added new land to the understanding of the entrepreneurial process, only few studies overpass the focus on the micro environment and include the wider institutional context in society (See however, Jack and Anderson 2002). However, whereas much research conceptualizes social networks in an instrumental fashion and disregards wider societal values and norms which shape their significance (cf., Nee & Ingram, 1998), a comparative ethnography by Tillmar's (2006) elicits the importance of the formal and informal institutional frameworks for the trust creation process amongst entrepreneurs.

Furthermore, Aldrich and Martinez (2001: 50) conclude that although the understanding of the forces in the environment that influence organizations have increased, much of the research has not been developed with the entrepreneurial process in mind. Furthermore, they conclude that the complexity of the models introduced by e.g. ecological and evolutionary researchers make them difficult to apply to entrepreneurial development.

A number of studies inside the evolutionary tradition do focus on the social and economic dynamics influencing the entrepreneurial activity in society (Aldrich; Thurec; Hanan and Freeman) but they often disregard the micro dynamics associated with individual entrepreneurial activities. However, as pointed out by Steyaert (2007) there are different streams of research trying to bridge entrepreneurial action at the individual level with a wider relational context, but few studies undertake the task of linking micro dynamics of the entrepreneurial process with the layers of dynamics in the wider social context. One of them is the study on situated entrepreneurship contributed by Fuller and Warren (2006). This study has been made within a framework of complexity theory, linking the entrepreneurial venture to the action network it is embedded in, and further linking this network to the cluster or the regional setting and wider to the macro context of the entrepreneur. The main point developed in their work is that novel or emergent structures cannot be understood in the framework of single layer models, irrespective of the descriptive power of such single layer models. In this view, the entrepreneurial process – or the process of emergence of the new venture – is not a straightforward causal process, but has to be interpreted as an interactive process, emerging from the interplay among single actors as well as between structural layers.

Entrepreneurship researchers have thus gradually recognized the need for both contextualizing the entrepreneurial process and understanding aspects of entrepreneurship that are not strictly confined to economic markets or purely business related issues (Dodd & Anderson, 2007; Mair, Robinson, & Hockerts, 2006; Sarasvathy, 2007; Steyaert & Hjorth, 2006; Steyaert & Katz, 2004; Sundin & Tillmar, 2008; West III, 2003). At the same time, institutional theories, which draw upon cultural-cognitive anthropology about the broad macro-cultural institutions governing action in institutional spheres (Scott, 1994; Scott, 2000), have been characterized by a

movement towards integrating actors and agency during the last decades (Scott, 2008). This movement has developed from an early focus on powerful macro actors who act as institutional entrepreneurs (DiMaggio, 1982; Eisenstadt, 1980; Greenwood & Hinings, 1996; Greenwood, Suddaby, & Hinings, 2002; Lawrence & Phillips, 2004; Lounsbury & Glynn, 2001) to more recent attempts at capturing the micro-level agency of human actors in maintaining, changing and disrupting institutions (Battilana, 2006, 2007; Boxenbaum & Battilana, 2005; Dorado, 2005; Lawrence & Suddaby, 2006; Powell & Colyvas, 2008; Zilber, 2007). Institutional studies show that, among others, exposure to institutional contradictions increases the likelihood of institutional entrepreneurship, e.g. in the case of boundary spanning organizations. However, most research efforts still deals with macro institutional agents or organizations, while there is scant research that addresses, how institutional entrepreneurship plays out at the micro level of individuals acting as e.g. boundary spanners (Rothenberg, 2007), as in the case of smaller emergent entrepreneurial ventures that challenges institutional norms or make use of institutional contradictions and openings between multiple spheres.

Furthermore, institutional scholars have recently called for more research applying institutional theory to entrepreneurship (Hwang & Powell, 2005), e.g. studies of how institutions shape or are shaped by entrepreneurial activity. As noted by institutional researchers Marquis and Lounsbury (2007) it is thus of high importance to recognize that ‘the sensing of “entrepreneurial opportunities” (Sarasvathy 2001) is not a neutral, objective occurrence, but enfolded in broader institutional dynamics involving competing logics’. In other words, entrepreneurial processes should not be cut off from the wider societal or institutional forces in which they emerge and may, in turn, serve to change. Scholars in both the entrepreneurship and institutional research fields are thus calling for more research at the interface (Garud, Hardy, & Maguire, 2007; Hwang & Powell, 2005; Mair, Martí, & Ganly, 2007; Phillips & Tracey, 2007; Sarasvathy, 2007), and research efforts that convey an integrative view of the interplay between micro level agency and wider institutional dynamics are needed.

This convergence of separate developments in institutional theories and theories of entrepreneurship is consequently leading to a new emerging area of research (Sundin & Tillmar, 2008). However, much of the institutional research that try to extend the framework of inquiry downwards to the micro-level tends still to overlook the socially-

dynamic and processual aspects of agency and actors' work with institutions, e.g. by explaining agency by use of enabling structural mechanisms (Battilana, 2006; Lawrence & Suddaby, 2006). Likewise, the lion's share of research on entrepreneurship as a socially-dynamic process tends to disregard the broad institutional picture of societal values and norms, which shape micro entrepreneurial processes. Thereby this research artificially disembeds entrepreneurial actors and agency from larger societal forces. In other words, more can be done both theoretical and methodological to provide an integrative approach to entrepreneurship that captures the socially-dynamic process of entrepreneurship unfolding between micro agency and macro institutional forces. It is our argument that such research efforts may prosper from drawing upon (both new and classic) anthropologies of entrepreneurial process and practice.

Theory: An anthropological perspective on the entrepreneurial process

While extant research has demonstrated some limitation in understanding the entrepreneurial process as a coherent dialectical movement including micro- as well as macro forces, we argue that important new knowledge for advancing the research field of entrepreneurship can be found in the process-oriented developments within anthropology (cf. Rosa and Bowes 1992). In other words, we wish to present a perspective on entrepreneurial actions as a tightly integrated dialectical process, including individual choices of opportunity recognition, as well as the dynamics of structural socio-economic constraints.

In economic analysis, the entrepreneur is an agent who takes risks and decisions and anticipates market factors in order to organize productive factors of production in new ways. However, the role of entrepreneurial activity has been fundamental to almost all forms of social organization, whether they are of an archaic nature or persist in modern times' society - at least if we follow Baumol (2004) and his conception of the entrepreneur as a promoter of innovation. Therefore, in the sections to follow, entrepreneurship is not narrowly defined in terms of the business start-up process, but it is related to the creation of opportunities and changes in existing structures on a more general level (Barth, 1967).

The relationship between economic activities and social, cultural, and political processes has for more than a century been one of the most central anthropological research themes (Bohannan & Dalton, 1962; Carrier, 1997, 2005; Garsten & De Montoya, 2004; Godelier, 1999; Gudeman, 1998, 2001; Long, 1968; Malinowski, 1922; Mauss, 1923-1924; Plattner, 1989). Entrepreneurship, in anthropological theory, is commonly associated with boundary spanning activities that combine the interrelation of different economic and other social structures, in order to create new opportunities. Researching entrepreneurship as a socially-dynamic process of bridging or changing institutional spheres has thus long been a central theme in anthropology.

The specific empirical area of entrepreneurship became the object of a broader and more fundamental paradigmatic and methodological discussion in the 1950s and 1960s on the nature of social structures and processes in social anthropology. The theories of entrepreneurial processes, subsequently, gave anthropological theory a substantial leap forward in the explanation of social change, which up to that time had been an unsolved problem of functionalism (Malinowski 1922: 1965), structural-functionalism (Radcliff-Brown 1924; 1952), and structuralism (Levi-Strauss 1966; 1969), to a large extent. These previous theories explained social changes mainly as stages, but met substantial difficulties when confronted with questions of what initiated the movement from one stage to another. Structuralist theories thus faced challenges of explaining deviation, choice, conflict and emergence. Such limitations gave rise to a surge in situational and process-based studies in social anthropology, which addressed how situational dynamics serve to both maintain and change wider societal structures (e.g., Gluckman, 1958; Kapferer, 1972, 1976).

Barth was one of the central proponents of anthropological processualism and used the empirical field of entrepreneurship to illustrate the dynamic interplay between entrepreneurial actions and socio-economic change. By including active actors in the production and reproduction of social structures, societal changes could be described as a dynamic and dialectical process of transaction and negotiation of behavioural patterns and institutionalized constraints (Barth 1966; Bourdieu 1977). Whereas the anthropological notion which so far has received most attention in entrepreneurship research is that of bricolage (Baker, 2007; Baker & Nelson, 2005; Garud & Karnøe, 2003), conceived by the structuralist Levi-Strauss (1966) as a mode of thinking, Barth

had thus developed a more socially-dynamic model of entrepreneurship as the making of new combinations of the means at hand through social processes of making and changing socio-economic patterns.

According to Barth (1966), entrepreneurs utilize available material resources and social relations to generate individual profit of both social and material character. The profit generating activity is based on an experimental risk-related practice that breaks the dominating mode of exchange of goods or services, or includes groups or individuals which are usually not involved in transactions. As an example, it can be mentioned that in many places in central Africa, until recently, it has not been possible to purchase or sell land using money as a means of exchange. Instead, land has been a commonality administrated by the local chief. Land, in other words, has belonged to a different economic sphere compared to other goods and the direct exchange between the two different domains of value has been unthinkable (cf. Dalton and Bohannan 1962; Long 1968). Resources and valuable knowledge in different areas of business can, thus, be constrained by and transacted through different sets of social relations (Barth 1967). In sum, this implies that the distribution and exchange of resources is 'embedded' and institutionalized in specific 'spheres' of circulation and exchange, and that they, to a large extent, are shaped and separated by social norms and values (cf. Barth 1967; Dalton and Bohannan 1962). Using Barth's concept of bridging transactions, it is possible to conceptualize how entrepreneurial actors establish new connections or bridges between distinct economic domains of actors and resources that formerly were separated and, in turn, creates new values or institutions governing socio-economic practice (Homans, 1967). In other words: exchange between the economic spheres may take place through 'holes' in the barriers between the spheres or what Barth (1963) termed 'channels of conversion'. Entrepreneurship is, hence, often about creating and utilizing new channels of conversions.

Since his seminal studies of entrepreneurship as social change in Norway and Darfur, Barth has gradually developed his early ideas about transactionalism, concerning how recurrent social interactions and transactions serve to create or transform institutionalized socio-economic patterns, to a more interpretive approach drawing on, among others, Max Weber (Barth, 1987, 1993, 2007). Although elements of his early studies concerning how new institutional values and norms for socio-economic practice

are created through transactional and negotiable processes between actors located in different value spheres did attract some critique (Prattis, 1983), the basic ideas in his process approach is still considered to carry value today among anthropologists (Friedman, 1994). This concerns, among others, the social process-based approach addressing how locally situated actors draw upon or convert various forms of resources and knowledge in different societal fields or 'streams' to serve particular ends and in this process support and transform societal patterns (Barth, 1987, 1993, 2007).

In recent years, the theoretical attention of anthropology has moved from a direct focus on entrepreneurship to perceiving social change and individual strategies as often implicitly including entrepreneurial agency (cf. Bourdieu 1990; Long 1992). Therefore, there are only a limited number of recent anthropological studies directly addressing entrepreneurship (Greenfield & Strickon, 1986; Stewart, 1991)– and mainly from a more empirically oriented angle. One example is Billig's (1994) critical essay which discusses entrepreneurship discourses in the Philippines. Furthermore, Wong (2000) provides a comprehensive ethnography of Chinese immigrants in the USA and thus follows in the ethnicity and entrepreneurship research tradition in anthropology. Another study is Yuchak's (2003) empirical analysis of entrepreneurial 'governmentality' in post-socialist Russia. Werbner (2002) analyzes the entrepreneurship of national elites of former top-level public servants in Botswana and the development of inter-ethnic partnerships by linking such processes to transformation of the capable African state. Stewart (2003) explores the contribution of anthropological kinship theories to family business research by examining forms of reciprocity and the discrepancies between the normative orders of kinship and market systems. Finally, Fadahunsi (2000) explores the informal entrepreneurial activities in West Africa using anthropological theory and methodology. These studies, however, are mainly empirical and contribute relatively little to the theoretical development in anthropology.

Nonetheless, more recent contributions from anthropology may still inform the debate on the entrepreneurial process in a novel way. Current anthropological scholarship thus conveys different notions of socially and culturally embedded agency and actorhood, which may serve to further illuminate the social and institutional dimensions of entrepreneurial agency. Social anthropologists have thus further developed the process-

based perspectives as well as their methodological underpinnings, e.g. by combining them with newer post-structuralist epistemologies (Glaeser, 2006; Kapferer, 2006). One of these areas of research concerns how to conceive of the processual dynamics of social networks. Thus, as Glaeser (2006) notes, conceptions of social networks in American sociology, which once were imported from social anthropology, often have come to convey a rigid understanding of how the formal configuration of social networks effect the processes they carry. Social anthropologists, however, originally conceived them as subject to ongoing patterning processes as these researchers tried to break with structural-functionalism (Glaeser, 2006). Glaeser (2006) thus proposes to further extend the network literature by using newer developments in anthropological processualism. Social networks are thus conceived as social formations constituted through the webbed flow of activities, which implies that processes in networks and network-constituting processes are constituted from the same (entrepreneurial) actions. Another recent contribution is made by Kapferer (2006), who draws on post-structuralism to extend to the tradition of situational analysis of the Manchester School of Social Anthropology. This school originally attempted to capture macro societal dynamics through processes of micro social situations and events as they unfold. Kapferer (2006) theorizes the situational dynamics as a locus for a complex web of distributed agency involved in processes of continual emergence and creativity. This research may service to add micro social dynamics to the literature on distributed and embedded entrepreneurial agency (Garud & Karnøe, 2003). Applying new anthropologies of social process to entrepreneurship may fruitfully be supported by new methodological developments in anthropology (Latour, 2005). The multi-sited ethnographic field methodology developed by Marcus and Fischer (Falzon, 2009; Marcus, 1998) thus allows for tracing social processes and agency as distributed across multiple sites.

Since Barth's seminal studies of entrepreneurial processes, other anthropologists have increasingly viewed agency as being embedded in macro societal structures and addressed how such structures become embodied in actors as deeper dispositions which shape actors' strategies for symbolic, economic or social resources (Ortner, 1999, 2006b). These perspectives draws among others on Bourdieu's (1977b, 2000) anthropology of practice and his economic anthropology. Ortner (1989, 2006a) has thus developed a dynamic anthropology of practice by combining insights from Bourdieu's

(1977b, 2000) and Geerts' works (1973). In addition, anthropologists have increasingly recognized the need for locating local fields and the actors within them in wider global processes or flows (Appadurai, 1996; Friedman, 1994). However, the common denominator of these newer anthropological views of agency in socio-economic contexts is the continued necessity of using field research methodologies and thick descriptions of social processes as they unfold in order to capture the general in the particular, without reducing action and agency to a function of wider institutional structures.

The underlying argument which follows from this section of this article is that while the study of the entrepreneurial process normally has the central business idea in focus, the way social and economic structures are bridged and channelled for exchange are built by the entrepreneur, which is a critical element in entrepreneurial activity. The argument is that new valuable insight can be reached by conceiving the entrepreneurial process as an ongoing dialectic process between different economic spheres, technical fields, ecological zones, geographical areas, or communities of practice, involving micro processes of individual opportunity recognition as well as macro processes of social bridging of socioeconomic spheres of exchange. In this view, inertia in the wider societal context of the entrepreneur is to be conceived as not only constraining, but also as prompting entrepreneurial action and thus, the process of entrepreneurial bridging. In the pursuit of entrepreneurial activity, by bridging separate spheres, zones, or fields, the entrepreneur acts also as an agent of social change. This will be illustrated by a short case on the relation between individual actions and social constraints.

Methodology

Barth (1967; 1993) suggests that an analytical and methodological framework for research on entrepreneurship should account for the ways relations of exchange and value circulation are produced and reproduced, by addressing the entrepreneurial process as it unfolds. Hence, the analytical and methodological approach for entrepreneurship research should be founded on the assumption that the unfolding of transactions between individuals cannot be deduced from established structures of individuals, such as formulated business plans and strategies. It requires a framework that addresses the knowledge and skills of individuals that inform the perception and

exploitation of opportunities, resources, and information. According to Barth (1963), an analysis based on simplified assumptions on linear causality and predictability will most likely fail to provide insight into the dynamics and dialectics of the entrepreneurial process (Barth 1967).

Data collection

Using a full-scale, five month ethnographic fieldwork of small-scale central Malawi entrepreneurs, conducted by an associate researcher, Pasgaard (2005) we have outline a short case illustrating our theoretical argumentation. This fieldwork used an exploratory qualitative approach to data collection, continuously introducing new information and questions to the research cycle (Bernard, 1995; Spradley, 1980). This methodological approach was applied to reach an understanding of issues which the informants might take for granted (e.g. Agar, 1986; Bourdieu, 1977a). The ideal, generally, was to generate questions as well as answers in close proximity to the research setting. Through observation and participation, research questions were developed, changed, or focused upon, in mutual interaction with the daily activities of the informants (Spradley, 1980).

To supplement observations, informal interviews were conducted with most families of the village and with individual key informants (Bernard, 1995). All in all, more than 100 individuals contributed to the data material. Early results were continuously discussed and cross-checked with different key informants. Two interpreters were used to assist during the interviews. Due to their social contacts and local knowledge, they had a substantial influence on the final results. The interpreters' statements and explanations, however, were continuously cross-checked.

The advantage of conducting an ethnographical fieldwork is that it gives the researcher a deep understanding of the setting, supplying the readers with multidimensional information, cross-relating different sources and perspectives in the discussion of the central themes. Furthermore, the ethnographic approach is particularly valuable in the study of implicit or sensitive issues, illustrating the nature of social relations in exchange processes and value circulation.

The setting

Of the 500 inhabitants in the village Mitengo the majority of which belonged to the Chewa tribe. However, migrations from other parts of the country and from Zimbabwe or Mozambique, lead to an increasing number of outsiders settling down in the area. Traditionally, the distribution of land has been guided by societal structures of inherited status and following social obligations as levelling mechanisms – wealthy inhabitants were obliged to assist relatives, friends, and neighbours. Through his power to distribute land, the chief traditionally was the top administrator of the exchange of value. This position has, in recent years, increasingly been replaced by the market's forces. More land is now available on the financial market, and government institutions are continuously taking over larger parts of authority previously held by the chief. In addition, villagers are feeling less obliged to follow the tradition of economically supporting less fortunate households and relatives in the immediate surroundings.

The primary income of the villagers comes from maize production, but due to the scarcity of land, additional income is necessary for most inhabitants. Firstly, this can be seasonal farming-labour, often paid by provisions such as maize. Secondly, it can be trade of handiwork or prostitution in the city, as an example. Thirdly, it can be the production of goods, such as bricks, beer, etc. There are, however, certain types of trade and production that are especially nurturing entrepreneurial ventures in Mitengo - such as the trade of meat, wood, hardware, foreign medicine, or credit, and the production of tobacco, furniture, and textiles. These types of businesses generate a relatively larger surplus compared to the conventional small scale business, but also assume a more substantial start-up capital and a higher risk.

Illustrative case:

The Tobacco Man: The altruist entrepreneur

Mr. Mgoguata is the only farmer making a living from growing tobacco. This is why the people in the village call him 'Tobacco Man'. He is Chewa, born in Mitengo and retired from a job at a large commercial tobacco plantation, which provided him with knowledge on growing tobacco, otherwise uncommon in Mitengo.

Being a local farmer, the Tobacco Man attracts capital to the village and distributes it through social obligation and a demand for labour power. In addition, Mr. Mgoguata is

very active in the local community. He is a member of the Catholic Church and the government party UDF. Moreover, he is the founder and an important financial contributor to the Mitengo School. The Tobacco Man is the only person in Mitengo that is a member of all authoritative institutions and he has achieved these positions due to strategic financial investments in important social relations.

By growing tobacco, Mr. Mgoguta is bridging the present divide between commercial large scale plantation farming and small scale garden crofting. Consequently, he is able to save up money in the bank, which is rather unusual in the local area. In Mitengo, private land is usually only used for growing maize and other food crops, but after changes from the democratization and privatization process of 1994, he has been able to utilize the opportunities made available between the authority of the chiefdoms and the new market economy. He thereby utilizes the new opportunity of exchanging money for positions in powerful institutions. As a result, the Tobacco Man is trying to integrate market forces into the traditional hierarchy. Social institutions are thus influenced and used.

According to the Tobacco Man, he is not an entrepreneur to solely generate wealth and make life easy for himself. On the contrary, he is sharing his economic surplus with his family and the different social institutions. All Mr. Mgoguta's relatives are living in Mitengo, and he prioritizes his financial obligations to them. And, during interviews, none of his relatives expressed any negative emotions towards him - which is rather uncommon in Malawi, when speaking of wealthy family members. Thereby, he is still subordinating himself to the traditional local normative pattern of rights and obligations.

Gassa: The opportunistic entrepreneur

As a member of the Ngoni tribe in Zimbabwe, Gassa was an outsider to Mitengo. In the 1980s, he left his home country and most of his relatives in search of new opportunities in Malawi. In Mitengo, he asked the chief for a piece of land that he secretly paid for. This transaction was possible because Gassa was a newcomer and because he disguised the transaction with the chief. Thereby Gassa was using concealment along with money to acquire a resource that traditionally was only available through the local hierarchy of inherency and social obligations.

Gassa supports only his close family and he does not engage in social obligations outside this social unit. Thereby he relies upon his personal contacts, avoiding social contacts imposed from the outside as relational norms, in order to create a zone of discretion around his operations (cf., Johannison, 2000). Accordingly, as an outsider, he is able to prioritize new investments at the expense of financial obligations to his kinsmen. As a consequence of his entrepreneurial activities, he is the wealthiest inhabitant of Mitengo. The main part of his surplus generates from credit business and from rental housing. This is unique to the area, since it is highly unusual to generate profit from relations to people with fewer resources than oneself. Traditionally, the system of social obligations is directing the flow of money the other way around. Gassa, however, is not interpreting the ideal of social obligation the way it has usually been conceived in Mitengo. When people ask him for money he offers them a loan instead, and in this manner, he utilizes the tradition of social obligation to expand his business area. According to Gassa, he is doing this as a social obligation and not to discourage the hardworking individuals, thus promoting entrepreneurial activities throughout the village.

Witchcraft as a social and economic constraint

The practice of witchcraft can be viewed as an example of how social structures might inflict the entrepreneurial process, making it a dialectical rather than a linear process including society in a wider context.

In Mitengo behaviour associated with the accumulation of wealth and power is deemed anti-social and increases the risk of being exposed to witchcraft as a result of jealousy. If one owns a car in an area where people are starving, it is seen as proof that he is not facing his social obligations. Witchcraft is a sanction that is activated by the observation of a practice of exchange that breaks with the conventional distribution structure. In other words, the risk of jealousy is particularly high when individuals accumulate power and material resources that are in opposition to the local expectation of rights and obligations.

Mankwala can be described as a witchcraft prophylaxis that can protect against all risks. The access to mankwala-protection, however, is dependent on finance and good

relations to trustworthy 'singanga' witch-doctors. Apart from protection through counter-witchcraft, altruistic behaviour is also believed to provide protection.

Entrepreneurs are highly exposed to witchcraft as a result of jealousy and the need for strong protection. Gassa's norm breaking venture is conditioned by and maintains a need for social relations outside the local area. He consciously excludes himself from interaction with the other villagers by iron walls around his house. He explains that because many villagers cannot pay back what they owe him, they might try to harm him through witchcraft. To Gassa, mankwala is the most important protection from witchcraft, even though it is expensive to protect his entire property. The protective devices that Gassa is using against witchcraft (mankwala, secrecy, and social distance) all need access to money.

The Tobacco Man, to a much higher extent, follows a strategy of attending his social obligations. He is socially active in the local community. He shares his wealth with relatives, supports the school, and has no walls around his house. He says that in order to face his social obligations, he requires money, which is why he produces tobacco. But, that alone does not totally free him from jealousy and the risk of being exposed to witchcraft.

Discussion and implications

As shown in the case the relation between entrepreneurship, social obligations, and witchcraft, is dialectical. The two entrepreneurs, through their alternative profit-oriented practices, contribute to the integration of new structures of exchange with regards to social rights and obligations into the existing system of value circulation. Thereby, the traditional system of social levelling and sanctions is slowly changing. In consequence, entrepreneurship in Mitengo is conditioned by the entrepreneurs being able to base their ventures on existing structures and at the same time, building bridges to new upcoming institutions. The entrepreneur, in other words, has to bridge between the paradoxes that form the basis for changes in the context (Hargrave & Van de Ven, Forthcoming, 2009) – also in relation to the perception of witchcraft that is integrated in such a process. The entrepreneurial ventures are conditioned by operating in the current institutional frames of exchange (social relation and network) as well as in upcoming

institutional structures (independent market forces). Thereby, the entrepreneur is actively using and transforming the social structures in the surroundings. This illustrates how the entrepreneurial process cannot be analysed and explained in terms of a single layer analysis. The network established is of importance, but so is the wider institutional system which comprises the norms and sanctions embedded in society.

Thus, on the one hand, the field study indicates that the two entrepreneurs are faced with inertia and frictions in the institutional setting in which they operate. On the other hand, the two entrepreneurs do not take inertia and barriers in the institutional setting for granted. They make use of the institutional inertia, separating different social and economic spheres to create new channels of exchange. They convert barriers of exchange to channels of exchange through their creative ways of bridging activities. Hence, the two entrepreneurs make their wealthy livelihood by overcoming or bypassing constraints institutionalised in their local society. In this very process they also – as a by product – build images of the new society yet to come, and they break established habits and collective norms.

In order to sustain their business, both of them have been entrepreneurial in overcoming levelling mechanisms in society and escaping traditional exchange modes. Their endurance and success has depended on their achievements as social – or institutional - entrepreneurs.

Hence, the stories of the two entrepreneurs illustrate the need to include the societal context as an active element in the analyses of entrepreneurial processes, since micro and macro processes interact in highly dynamic ways. In short, we argue that viewing the entrepreneurial process as a dialectical movement of negotiation between different spheres of value should not be confined to anthropological writing. On the contrary, the notion of a dialectical entrepreneurial process combining a micro perspective of individual experiences and choice, with a macro perspective on societal structures, is highly relevant to all entrepreneurship research including the study of modern western business ventures.

Although this paper has only scratched the surface of process-based anthropology and not given full credit to the detailed ethnographic field-stories, it is our hope that the paper has illustrated the usefulness of this perspective for the study of entrepreneurship. From Barth, we learn that entrepreneurship is a process of bridging between existing structures and new structures, creating opportunities in combining different economic spheres. His focus on the dialectical movement between structure and agency provides an account for the entrepreneurial process including both individual entrepreneurial actors and collective social structures in a dynamic and dialectic fashion.

As Barth puts it, structures are maintained or changed by action, and in this way, entrepreneurs also become institutional entrepreneurs in the sense that they engage in the establishment of new channels of social, economic, and informational exchange. They do this by bridging spheres that used to be separated. Elements of Barth's theories may thus contribute to the development of socially-dynamic models of agency to better integrate institutional theories with theories of entrepreneurship. Newer anthropological theories of social process may further extend the understanding of the institutional and social embeddedness of entrepreneurship and contribute to contextualizing entrepreneurial processes (e.g., Evens & Handelman, 2006). Anthropological processualism and ethnographic methodology thus provides fruitful research avenues for entrepreneurship scholars in shedding new light upon the socially-dynamic aspects of micro entrepreneurial agency in influencing, using and transforming institutional patterns (Powell & Colyvas, 2008; Suddaby & Greenwood, Forthcoming 2009).

Due to the exploratory character of the study, the attempt to provide general practical guidelines may be somewhat premature. However, given the non-linear character of entrepreneurial processes, participants in the entrepreneurial process should not put too much emphasis upon pre-planning or formulation of business plans (Sarasvathy, 2007). In addition, as shown in the present study, some aspects of entrepreneurship may comprise practical agency of bridging, maintaining or changing institutions (Lawrence & Suddaby, 2006). This implies that entrepreneurship cannot be taken as a neutral and value-free process, but may become subject to institutional sanctions. Participating in entrepreneurial processes may therefore require multiple institutional or social skills in order to mobilize or gain legitimacy from other actors to initiate norm-challenging entrepreneurship as well as e.g. establishing new forms of legitimate practice in society.

We recognize that the findings reported in this article are based on a single ethnographic field work, which limits the empirical generalizability of the conclusions that may be drawn. However, due to the explorative nature of the article, the role of the inductive empirical work is to guide theoretical development rather than offer comprehensive empirical testing.

In consequence, further research into the micro-macro dialectics of the entrepreneurial process is required in order to establish the extent to which such dynamics are general to business venturing. Hence, we believe it worthwhile to stimulate research, which combines micro and macro perspectives on the entrepreneurial process. On the one hand, formal theories, which are broad in their construct, are important to advance comprehensive models and guide appreciative theorizing. On the other hand, appreciative theorizing, as conducted in the process-oriented anthropology illustrated in this paper, is important to identify phenomena that resist formal analyses and also give way to results that deviate from the rigour of formal analyses.

References

- Agar, M. H. (1986). *Speaking of Ethnography*. Newbury Park, Sage.
- Aldrich, H. and Martinez, M. A. (2001). Many are Called, but Few are Chosen: An Evolutionary Perspective for the Study of Entrepreneurship. *Entrepreneurship Theory and Practice*, Summer, 41-56
- Aldrich, H. and Zimmer, C. (1986). Entrepreneurship through Social Networks. In: Sexton, D.L. and Smilor, R. W. (eds.) *The Art and Science of Entrepreneurship*, Cambridge, Massachusetts, Ballinger, 3-23
- Baron, R. A. (2004) The cognitive perspective: a valuable tool for answering entrepreneurship's basic "why" questions, *Journal of Business Venturing*, 19, 2. Pp 221-239
- Barth, F. (1963). *The Role of the Entrepreneur in Social Change in Northern Norway*. Oslo, Universitetsforlaget.
- Barth, F. 1966. *Models of social organization*. Glasgow: The university Press.
- Barth, F. (1967). *Economic Spheres in Darfur*. *Themes in Economic Anthropology*. R. Firth. London, Tavistock Publications.
- Baumol, W. J. (2004). Entrepreneurial Cultures and Countercultures. *Academy of Management Learning and Education*, 3, 3, 316-326
- Bernard, R. H. (1995). *Research Methods in anthropology, Qualitative and Quantitative approaches*. Thousand Oaks, Sage.
- Billig, M.S. 1994. 'The Death and Rebirth of Entrepreneurism on Negros Island, Philippines: A Critique of Cultural Theories of Enterprise'. *Journal of Economic Issues* 28, pp. 659-78.
- Bouncker, R. B. (2004). "Cultural Diversity in Entrepreneurial Teams: Findings of New Ventures in Germany." *Creativity and Innovation Management* 13(4): 240-253.
- Bourdieu, P. (1977). *Outline of a Theory of Practice*. Cambridge, Cambridge University Press.
- Bourdieu, P. 1990. *The Logic of Practice*. Oxford: Blackwell.
- Bhave, M. P. (1994) A process model of entrepreneurial venture creation. *Journal of Business Venturing*, 9, 3, Pp 223-242
- Bygrave, W. D. and Hofer, C. W. (1991). The Entrepreneurial Process. In: Bygrave, W. D. (ed.) *The Portable MBA in Entrepreneurship*. New York, Wiley, 1-25

- Dana, L.-P. 1995. 'Entrepreneurship in a Remote Sub-Arctic Community'. *Entrepreneurship Theory and Practice* 20(1), 57-72.
- Dalton, P. and G. Bohannon (1962). *Markets in Africa*. New York, Anchor Books.
- Fadahunsi, A. (2000) Researching informal entrepreneurship in Sub-Saharan Africa: A note on field methodology, *Journal of Developmental Entrepreneurship*, Vol. 5, Issue 3
- Fuller, T. and Warren, L. (2006). Complex explanations of order creation, emergence and sustainability as situated entrepreneurship. In Christensen, P. R. and Poulfelt, F (eds) *Managing Complexity and Change in SMEs*. Frontiers in European Research. London, Edward Elgar Publishing.
- Gartner, B.(1985). A conceptual framework for describing the phenomenon of new venture creation. *The Academy of Management Review*, 10, 4. 696-706
- Gartner, B. (1988). Who is the entrepreneur? is the wrong question. *American Journal of Small Business*, 12, 4, 11-32
- Gartner, B. (1993). Words leads to deeds: Towards an organizational Emergence vocabulary, *Journal of Business venturing*, 5, 1, 231-239
- Hannan, M. T. and Freeman, J. (1976) The population ecology of organizations. *American Journal of Sociology*, 11, 1, 929-964
- Hayek, von, F.A. (1937). Economics and knowledge, *Economica*, 4, 33-54
- Jack, S. L. and Anderson, A. L. (2002) The effects of embeddedness on the entrepreneurial process, *Journal of Business Venturing*, 17, 3, Pp 467-487
- Johannisson, B. (1988). Business formation — a network approach. *Scandinavian Journal of Management*, 4, 3-4, 1988, Pp 83-99
- Johannisson (1995) "Paradigms and Entrepreneurial Networks - some Methodological Challenges." *Entrepreneurship and Regional Development*. 7, 3, pp 215-232.
- Johannisson, B 2000 'Networking and Entrepreneurial Growth.' In Sexton, D & Landström, H (Eds.) *Handbook of Entrepreneurship*. London: Blackwell. Pp 368-386.
- Johannisson, B. (2005):
- Levi-Strauss (1963). *Structural Anthropology*. New York, Basic books.
- Olson, P. (1986). "Entrepreneurs: Opportunistic decision Makers." *Journal of Small Business Management* **29-35**.
- Long, N. (1968). *Social Change and the Individual: Social and Religious Responses to Innovation in a Zambian Rural Community*. Manchester: Manchester University Press.

- Rosa P. & Bowes, A. (1992). *Entrepreneurship: Some Lessons of Social Anthropology*. In H. Klandt, (Ed.), *Entrepreneurship and Business Development*, (pp. 87-100). Aldershot: Avebury.
- Long, N. (1992b). Conclusion. In. N. Long & A. Long (Eds.), *Battlefields of Knowledge: The Interlocking of Theory and Practice in Social Research and Development* (pp 268-277). London: Routledge.
- McClelland, D. C. (1961). *The Achieving Society*, New York, Princeton, Van Nostrand
- Nelson, R. and Winter, S. G. (1982). *An Evolutionary Theory of Economic Change*, Cambridge Massachusetts, The Belknap Press of Harvard University Press.
- Pasgaard, I (2005) *Antropologi & Entrepreneurship*. Department of Anthropology. University of Aarhus.
- Shane, S & S. Venkataraman (2000) *The Promise of Entrepreneurship as a Field of Research*, *Academy of Management Review*, Vol. 25
- Spradley, J. P. (1980). *Participant observation*. New York, Holt Rinehart and Winston.
- Yurchak, A. 2003. *Russian Neoliberal: The Entrepreneurial Ethic and the Spirit of New Careerism*. *In Russian Review*. Vol. 62, No. 1. 72-90
- Van der Ween, M. and Wakkee, I. (2003). *Understanding the entrepreneurial process*. In; Watkins, D, (ed.) *Annual Review of Progress in Entrepreneurship*. Vol. 2. Southhamton Business School. 114-153
- Wong, B. 2000 *Ethnicity and Entrepreneurship: The New Chinese Immigrants in the San Francisco Bay Area*. Boston, London, Toronto: Allyn and Bacon.
- Agar, M. H. 1986. *Speaking of Ethnography*. Newbury Park: Sage.
- Appadurai, A. 1996. *Modernity at large: cultural dimensions of globalization*. Minneapolis: University of Minnesota Press.
- Baker, T. 2007. *Resources in play: Bricolage in the Toy Store(y)*. *Journal of Business Venturing*, 22(5): 694-711.
- Baker, T., & Nelson, R. E. 2005. *Creating something from nothing: resource construction through entrepreneurial bricolage*. *Administrative science quarterly*, 50(5): 329-366.
- Barth, F. 1987. *Cosmologies in the Making: A Generative Approach to Cultural Variation in inner New Guinea*. Cambridge: Cambridge University Press.
- Barth, F. 1993. *Balinese worlds*. Chicago: University of Chicago Press.

- Barth, F. 2007. Overview: sixty years in anthropology. *Annual Review of Anthropology*, 36: 1-16.
- Battilana, J. 2006. Agency and Institutions: The Enabling Role of Individuals' Social Position. *Organization*, 13(5): 653-676.
- Battilana, J. 2007. Initiating divergent organizational change: the enabling role of actors' social position, *Harvard Business School Working Paper*: Harvard Business School.
- Bernard, R. H. 1995. *Research methods in anthropology: Qualitative and quantitative approaches*. Thousand Oaks: Sage.
- Bohannan, P., & Dalton, G. 1962. *Markets in Africa*. [Evanston, Ill.]: Northwestern University Press.
- Bouncker, R. B. 2004. Cultural Diversity in Entrepreneurial Teams: Findings of New Ventures in Germany. *Creativity and Innovation Management*, 13(4): 240-253.
- Bourdieu, P. 1977a. *Outline of a theory of practice*. Cambridge: Cambridge University Press.
- Bourdieu, P. 1977b. *Outline of a theory of practice*. Cambridge ; New York: Cambridge University Press.
- Bourdieu, P. 2000. "Le champ des pouvoirs locaux". I: Les structures sociales de l'économie 155-172. Paris: Seuil.
- Boxenbaum, E., & Battilana, J. 2005. Importation as innovation: transposing managerial practices across fields *Strategic Organization*, 3: 355-383.
- Carrier, J. G. 1997. *Meanings of the market : the free market in western culture*. Oxford ; New York: Berg.
- Carrier, J. G. 2005. *A handbook of economic anthropology*. Cheltenham, UK ; Northampton, MA: Edward Elgar.
- DiMaggio, P. J. 1982. Cultural entrepreneurship in nineteenth-century Boston: The creation of an organizational base for high culture in America. *Media, Culture & Society*, 4: 33-50.
- Dodd, S. D., & Anderson, A. R. 2007. Mumpsimus and the Mything of the Individualistic Entrepreneur. *International Small Business Journal*, 25: 341-359.
- Dorado, S. 2005. Institutional Entrepreneurship, Partaking, and Convening. *Organization Studies*, 26(3): 385-414.

- Eisenstadt, S. N. 1980. Cultural orientations, institutional entrepreneurs, and social change. Comparative analyses of traditional civilisations. *American Journal of Sociology*, 85: 840–869.
- Evens, T. M. S., & Handelman, D. 2006. *The Manchester School : practice and ethnographic praxis in anthropology*. New York: Berghahn Books.
- Falzon, M.-A. 2009. *Multi-sited ethnography : theory, praxis and locality in contemporary research*. Aldershot, Hants, England ; Burlington, VT: Ashgate.
- Friedman, J. 1994. *Cultural identity and global process*. London ; Thousand Oaks, Calif.: Sage Publications.
- Garsten, C., & De Montoya, M. L. 2004. *Market matters: exploring cultural processes in the global marketplace*. Houndmills, Basingstoke, Hampshire ; New York: Palgrave Macmillan.
- Garud, R., Hardy, C., & Maguire, S. 2007. Institutional Entrepreneurship as Embedded Agency: An Introduction to the Special Issue. *Organization Studies*, 28: 957 - 969.
- Garud, R., & Karnøe, P. 2003. Bricolage vs. breakthrough: distributed and embedded agency in technology entrepreneurship. *Research Policy*, 32: 277-300.
- Geertz, C. 1963. *Peddlers and princes; social change and economic modernization in two Indonesian towns*. Chicago,: University of Chicago Press.
- Geertz, C. 1973. *The Interpretation of Cultures*. New York: Basic Books.
- Glaeser, A. 2006. An Ontology for the Ethnographic Analysis of Social Processes. Extending the Extended-Case Method. In T. M. S. Evens, & D. Handelman (Eds.), *The Manchester School. Practice and Ethnographic Praxis in Anthropology*: 64-93. New York, Oxford: Berghahn Books.
- Gluckman, M. 1958. *Analysis of a social situation in modern Zululand*. [Manchester]: Manchester University Press.
- Godelier, M. 1999. *The enigma of the gift*. [Chicago]: University of Chicago Press.
- Greenfield, S. M., & Strickon, A. (Eds.). 1986. *Entrepreneurship and social change*. Lanham: University Press of America.
- Greenfield, S. M., & Strickon, A. 2000. A new paradigm for the study of entrepreneurship and social change. *Economic development and cultural change*, 29(3): 467-499.
- Greenwood, R., & Hinings, C. R. 1996. Institutional entrepreneurship in mature fields: the Big Five accounting firms. *Academy of Management Journal*, 49: 27-48.

- Greenwood, R., Suddaby, R., & Hinings, C. R. 2002. Theorizing change: the role of professional associations in the transformation of institutional fields. *Academy of Management Journal*, 45(1): 58-80.
- Gudeman, S. 1998. *Economic anthropology*. Cheltenham ; Northampton, MA: E. Elgar Pub.
- Gudeman, S. 2001. *The anthropology of economy: community, market, and culture*. Malden, Mass.: Blackwell.
- Hargrave, T. J., & Van de Ven, A. H. Forthcoming, 2009. Institutional work as the creative embrace of contradiction. In T. B. Lawrence, B. Leca, & R. Suddaby (Eds.), *Institutional Work: Actors and Agency in Institutional Studies of Organizations*. Cambridge: Cambridge University Press.
- Homans, G. C. 1967. Review: Models of Social Organization by Fredrik Barth. *American anthropologist review* 69(3/4): 386.
- Hwang, H., & Powell, W. W. 2005. Institutions and Entrepreneurship. In S. A. Alvarez, R. Agarwal, & O. Sorenson (Eds.), *The Handbook of Entrepreneurship*: 179-210.
- Johannison, B. 2000. Networking and entrepreneurial growth. In D. Sexton, & H. Landström (Eds.), *Handbook of Entrepreneurship*: 368-386. London: Blackwell.
- Kapferer, B. 1972. *Strategy and Transaction in an African Factory: African Workers and Indian Management in a Zambian Town* Manchester: Manchester University Press.
- Kapferer, B. 1976. *Transaction and meaning: directions in the anthropology of exchange and symbolic behavior*. Philadelphia: Institute for the Study of Human Issues.
- Kapferer, B. 2006. Situations, crisis, and the anthropology of the concrete. In T. M. S. Evens, & D. Handelman (Eds.), *The Manchester School: Practice and ethnographic praxis in anthropology*: 118-158. New York: Berghan.
- Latour, B. 2005. *Reassembling the social : an introduction to actor-network-theory*. Oxford ; New York: Oxford University Press.
- Lawrence, T. B., & Phillips, N. 2004. From Moby Dick to Free Willy: Macro-Cultural Discourses and Institutional Entrepreneurship in Emerging Institutional Fields. *Organization*, 11: 689 - 711.
- Lawrence, T. B., & Suddaby, R. 2006. Institutions and Institutional Work. In S. Clegg, C. Hardy, T. Lawrence, & W. R. Nord (Eds.), *Handbook of Organization Studies*: 215-254. London: Sage Publications.
- Lévi-Strauss, C. 1966. *The Savage Mind*. Chicago: The University of Chicago Press.

- Lindh de Montoya, M. 2000. Entrepreneurship and culture: the case of Freddy the strawberry man. In R. Swedberg (Ed.), *Entrepreneurship: The Social Science View*. Oxford: Oxford University Press.
- Long, N. 1968. *Social change and the individual: a study of the social and religious responses to innovation in a Zambian rural community*. Manchester,: Published for the Institute for Social Research, University of Zambia, by Manchester U.P.
- Lounsbury, M., & Glynn, M. A. 2001. Cultural entrepreneurship: stories, legitimacy, and the acquisition of resources. *Strategic Management Journal*, 22(6/7): 545-565.
- Mair, J., Martí, I., & Ganly, K. 2007. Institutional voids as spaces of opportunity. *European Business Forum*.
- Mair, J., Robinson, J., & Hockerts, K. 2006. *Social entrepreneurship*. New York: Palgrave Macmillan.
- Malinowski, B. 1922. *Argonauts of the western Pacific*. London,: G. Routledge & sons.
- Marcus, G. E. 1998. *Ethnography through thick and thin*. Princeton, N.J.: Princeton University Press.
- Marquis, C., & Lounsbury, M. 2007. Vive la résistance: competing logics and the consolidation of U.S. community banking. *Academy of Management Journal*, 50(4): 799–820.
- Mauss, M. 1923-1924. *Essai sur le don. Forme et raison de l'échange dans les sociétés archaïques*.
- Nee, V., & Ingram, P. 1998. Embeddedness and beyond: Institutions, exchange and social structure. In M. C. Brinton, & V. Nee (Eds.), *The new institutionalism in sociology*: 19-45. Stanford: Stanford University Press.
- Ortner, S. B. 1989. *High religion : a cultural and political history of Sherpa Buddhism*. Princeton, N.J.: Princeton University Press.
- Ortner, S. B. (Ed.). 1999. *The fate of "culture": Geertz and beyond*. Berkeley: University of California Press.
- Ortner, S. B. 2006a. *Anthropology and social theory : culture, power, and the acting subject*. Durham: Duke University Press.
- Ortner, S. B. 2006b. *Anthropology and social theory: culture, power, and the acting subject*. Durham: Duke University Press.
- Phillips, N., & Tracey, P. 2007. Opportunity recognition, entrepreneurial capabilities and bricolage: connecting institutional theory and entrepreneurship in strategic organization. *Strategic Organization*, 5(3): 313-320.

- Plattner, S. 1989. *Economic anthropology*. Stanford, Calif.: Stanford University Press.
- Powell, W. W., & Colyvas, J. A. 2008. Microfoundations of Institutional Theory. In R. Greenwood, C. Oliver, K. Sahlin, & R. Suddaby (Eds.), *Handbook of Organizational Institutionalism*: 276-298. London: Sage Publishers.
- Prattis, I. 1983. Barthing Up the Wrong Tree *American Anthropologist*, 85(1): 103-109.
- Rothenberg, S. 2007. Environmental managers as institutional entrepreneurs: The influence of institutional and technical pressures on waste management. *Journal of Business Research*, 60: 749-757.
- Sarasvathy, S. D. 2007. *Effectuation: elements of entrepreneurial expertise*. Northampton, MA: Edward Elgar.
- Scott, W. R. 1994. Conceptualizing organizational fields: linking organizations and societal systems. In H. U. Derlien, U. Gerhardt, & F. W. Scharpf (Eds.), *Systemrationalitat und partialinteresse*. Baden: Nomos Verlagsgesellschaft.
- Scott, W. R. 2000. *Institutional change and healthcare organizations: from professional dominance to managed care*. Chicago: University of Chicago Press.
- Scott, W. R. 2008. Approaching adulthood: the maturing of institutional theory. *Theory and society*, 37: 427-442.
- Spradley, J. P. 1980. *Participant observation*. New York: Holt Rinehart and Winston.
- Stewart, A. 1991. A prospectus on the anthropology of entrepreneurship. *Entrepreneurship Theory & Practice*, 16: 71-91.
- Stewart, A. 2003. Help one another: Use one another: Toward an anthropology of family business. *Entrepreneurship Theory & Practice*, 27: 383-396.
- Steyaert, C. 2007. 'Entrepreneurial' as a conceptual attractor? A review of process theories in 20 years of entrepreneurship studies. *Entrepreneurship & Regional Development*, 19(6): 453-477.
- Steyaert, C., & Hjorth, D. 2006. *Entrepreneurship as social change*. Cheltenham, UK ; Northampton, MA: Edward Elgar.
- Steyaert, C., & Katz, J. 2004. Reclaiming the space of entrepreneurship in society: geographical, discursive and social dimensions. *Entrepreneurship & Regional Development*, 16: 179-196.
- Suddaby, R., & Greenwood, R. Forthcoming 2009. Researching Institutions and Institutional Change. In D. Buchanan, & A. Bryman (Eds.), *Handbook of Organizational Research Methods* London: Sage.

- Sundin, E., & Tillmar, M. 2008. A Nurse and a Civil Servant changing institutions: Entrepreneurial processes in different public sector organizations. *Scandinavian Journal of Management*, 24: 113-124.
- Tillmar, M. 2006. Swedish tribalism and Tanzanian entrepreneurship: preconditions for trust formation. *Entrepreneurship & Regional Development: An International Journal*, 18(2): 91-107.
- Werbner, R. 2002. Cosmopolitan ethnicity, entrepreneurship and the nation: Minority elites in Botswana. *Journal of Southern African Studies*, 28(4): 731-753.
- West III, G. P. 2003. Connecting levels of analysis in entrepreneurship research: a focus on information processing, asymmetric knowledge and networks. In C. Steyaert, & D. Hjorth (Eds.), *New Movements in Entrepreneurship*: 51-.
- Zilber, T. B. 2007. Stories and the Discursive Dynamics of Institutional Entrepreneurship: The Case of Israeli High-tech after the Bubble. *Organization Studies*, 28(7): 1035-1054.
- Wong, B. 2000 *Ethnicity and Entrepreneurship: The New Chinese Immigrants in the San Francisco Bay Area*. Boston, London, Toronto: Allyn and Bacon.

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Discussed dynamism of small businesses in India created through humanitarian microcredit, a case study

Sarah HILLION

Here is a case study about small Western humanitarian charities working in developing economies. The field is a French association providing sponsorships and microcredit to single Dalit mothers in Pondicherry, India, to help them create their own business and reach empowerment. The decision makers are French people, employing some local women. The researcher worked under the constructivist paradigm. The contribution summarizes four months of research in India, mostly based on observation and meetings. The paper first displays an academic review about the issues of trust in NGOs and cross-cultural management. The author mainly refers to Philippe d'Iribarne and his conceptual frame of an interculturality analyzed through a social approach. The case explains how an internal crisis in the association impacts the beneficiaries who started their small business. Although mostly positive, the results are discussed under the shadow of the limits emerging from differences of culture, incompetence and reminiscences of a colonial past in the dynamism of small business in a developing country.

This paper, which is a partial summary of a Master memoir¹ and the first year of a Management PhD about intercultural management and micro credit in small Western humanitarian charities working in developing economies, should contribute to the theme of small business supported by the development aid, both in a theoretical and practical view. We would like to enhance the complex relationship between the association (composed of Western decision makers and donors and local employees) and the beneficiaries who create their own business thanks to microcredit and sponsorship. Before anything, the author wants to display the importance of trust in this particular type of organizations (nonprofit sector). To do so, some of the main academic contributions to the theme will be exposed (mostly in the relational paradigm), as well as those, more recent and often criticized, but unavoidable, of cross-cultural management as a key for efficiency. Microcredit and its different applications and limits will also be dealt with.

A second part is dedicated to the research method used and its limits. The approach of the case was mainly qualitative and constructivist, through observation and direct interviews. It was conducted in 2007 in a small French charity working among single Tamil mothers in Pondicherry, India. The originality of the case is that, in the context of a rather common managerial crisis met on the field, some aspects happened to be proper only to this kind of organizations and impact the process of business

¹ Hillion 2007.

generation and management as well as the relationship between the Microfinance Institution and the beneficiaries. Indeed, the crisis did not only imply the traditional “boss-employees” interconnections, but two other stakeholders who came to interfere in the whole process: donors and, which is the most striking application of distrust, beneficiaries. The 19 single mothers who set up their business took a surprising part in the crisis development. All these disrupted links generated quite an insecure situation. Hence our questioning about the success of such practices in the theme of small business in developing economies.

1. ACADEMIC REVIEW OF TRUST, INTERCULTURAL MANAGEMENT AND MICROCREDIT

One thing is certain: very few researchers have oriented their work towards our field, whether in economy or management; whether about trust or intercultural management. Papers do exist about famous Non Governmental Organizations (NGOs), or the not less famous “non-profit sector” in the United States (which implies so many kinds of action for which money is not the first goal), but the very case of small humanitarian structures, more and more numerous since the 2004 catastrophe of the Tsunami, has not really been dealt with so far. Their relationship with the beneficiaries is also seldom referred to, especially in the context of microfinance, which is generally managed by financial institutions instead of persons.

Therefore we shall try to adapt existing theories about the most relevant factors of our case, that is trust (in organizations and in society in general), the necessary intercultural management and the principle of microfinance.

1.1. DEFINITIONS OF TRUST AND TRUST IN NGOS²

The general theme of trust is illustrated in the relational paradigm, which consists in attracting, maintaining and developing relationships with one’s partners ((Morgan and Hunt 1994). Möller and Hallinen (2000) have described a relational approach upon networks (that is between all the stakeholders). They have showed that inside the organization, this approach implies various factors: focus on the dyad client-supplier, limited number of actors, interdependency, difficult change in relationships, necessary activity of all actors, long term relationships and social aspect of the latter.

This approach is quite relevant in the context of the nonprofit sector, all the more among the small charities we are interested in. Indeed, recent studies directed by the French Institute CerPhi³ (Centre of Studies and Research about Philanthropy), as well as a market research⁴ made for a local agency of the French Red Cross in 2006, have explained that the smaller and the closer the structure is, the more trustful

² The following references are extracted from Christelle Perrin’s work about trust between NGOs and their funding agencies (2005).

³ CERPHI (2005) “La générosité des français” (*The generosity of the French*).

⁴ HILLION (2006)

donors are, provided that they are implicated in the aid process. The network is particular, but the factors of the approach are available.

1.1.1. INTERPERSONAL TRUST IN SOCIOLOGY AND SOCIAL PSYCHOLOGY

In these sciences, trust is considered as founder of any kind of reciprocation. It is positive in interpersonal exchanges and two elements are taken into account in this case: the intentions/motivations and the ability to do what is expected. Therefore two moral dimensions are taking part in the process: the integrity/honesty of the partner and benevolence, that is one's interests should not be contradictory with the partner's ones. The nonprofit structures, especially the smallest ones, more personal, are supposed to generate such relationships.

1.1.2. TRUST IN ECONOMY

In economy, the concept of trust has taken time to emerge. But opportunism and uncertainty in the world economy and business have showed difficulties for researchers as well as practitioners. Trust has therefore become a power of foreseeable nature of the partner's behaviour and thus contributes to diminish uncertainty (Luhmann 1988).

From 1995, approaches have focussed on organizations, considering economic growth. The latter is revealed much more important in companies generating more trust by a comparative study led by Fukuyama. For Allouche and Amman (1998), trust is also a key for the performance of family business. But trust is not considered equally by all economists. The institutionalists argue that it only plays of part of creation of a common sense in societies, regulated by institutions. Some others (Coleman 1990; Williamson 1993) think that the decision to give one's trust is the more complicated result of calculation involving costs, profits and risks of the process.

1.1.3. TRUST IN AND BETWEEN ORGANIZATIONS

Management science has largely dealt with the concept of trust in and between organizations, especially in the US and then in Europe (Mayer, Davis, and Schoorman 1995; Lane and Bachmann 1996). It is tightly related to coordination, cooperation and commitment. The new theories of participative management also tend to take mutual trust in consideration inside work groups, for a better efficiency.

More precisely in marketing science, trust has been studied, but at an industrial scale, that is between partners or groups and inside the restructuring of their decisions. However, the factors are interesting in any kind of situation. According to Morgan and Hunt (1994), trust is the most required factor between retailers and their suppliers. For Karpik (1996), trust is used to reduce uncertainty before signing a contract, and may grow, according to the image, reputation and signs of competency of the counterpart. It is a means to appraise the latter. Then trust becomes a kind of obligation, the two parts having to comply with the contract terms as accurately as possible.

In the service field, trust is required in any long-term relation. But there are not many papers dealing with trust among consumers. Gurviez (1996, 1997, and 1998) reveals that trust is important in the relation to a particular brand and the consumer's faithfulness. The different facets of trust in this case are the benevolence, credibility and integrity of the brand. Sirieix and Dubois (1999) mainly show the link between trust and satisfaction. Trust is therefore at the centre of professional relations between organizations and their counterparts. It seems obvious that nonprofit organizations are also deeply concerned by the matter. But to what extent are the different kinds of relations lived by this kind of organizations implied in the process? Have researchers considered all the interactions?

1.1.4. TRUST AND NONPROFIT ORGANIZATIONS

a) Trust justifies the nonprofit existence

Without being traditional firms or companies, these organizations have to obey to some managerial principals, whereas merchant companies are trying to be more and more ethic and close to nonprofits' humanist goals (Thiery and Perin 2004). The nonprofit sector is supposed to be committed to civic-minded activities, considering general interest and social welfare (Ryan 1999). The reasons why people are attracted by such or such nonprofit organization are not clearly established, but trust happens to be at the very heart of the process. The missions themselves may generate trust, which implies much less control over the activities than in commercial structures. What is more, the social action cannot be evaluated, however hard some may have tried to create quantitative or qualitative tools of control (Herman and Renz 1999). Collectiveness and voluntarism in favour of social and fair policy is the basis of humanitarian associations (the very word implies a lot) and trust has a big part to play from this statement. To be more precise, we shall try to review the three types of relations (and trust relations) that are held inside the organizations.

b) Trust in the donor/organization relation

As we have seen, all relations in the nonprofit are particular because of the precise nonprofit/voluntary nature of the whole action. Very few texts have been released so far on the subject, except in the US, where the nonprofit sector has become quite a field of investigation and ... profit for the last decade. The French case has to be cautiously dealt with since "associations" are very popular and numerous in the country. There is not one topic for which no association exists. Most of them live on donations and therefore donors have to be attracted as well as reassured. Indeed, according to a study by Sogerm ⁵(2001), the lack of trust is the main brake to donation in the nonprofit sector in France. A typology of donors was even realized on the occasion, from which we have sacked a synthesis.

⁵ Observatoire de la Générosité et du Mécénat, Fondation de France, 2001.

F.1.

TYOLOGY OF DONORS

TYPE OF DONOR	Behaviour	Donation	Type of donation	Associated value	BRAKES	
The « aware»	Young, low socioprofessional categories, still living in poverty. Tend to be distrustful.	Low/limited, from hand to hand or « in kind ». Very little rationalized act.	EMOTIONAL = emergency Intense need for action, instantaneous emotion.	FEELING OF MUTUALIZATION OF THE DEBT	LACK OF TRUST/ IMPENETRABILITY OF MANAGEMENT(finances)	
The « activists »	Young skilled adults. Progressive political convictions, environmentalists. Tending to spirituality.	Considered, scheduled, often regular. Preference for « counter - power » associations.	MAGICAL = fear of death Obsession of security (medical research...) ; identification with victims	PLANETARY RESPONSIBILITY		
The « spared»	40/60 y-o, economically and socially well-off. Guilt-feelings. Anxiety to establish «poor-rich» equilibrium.	Often regular and to various associations.	RATIONAL = Anxiety for solidarity. Intense need for esteem, reflection, stability and understanding projects. MAGICAL = fear of death PLEASURE = act of love emotional motivation, need for accomplishment, tending to egocentricity. Compensation.	ACTIVE CITIZENSHIP		Too Much SOLICITATION
The « generous»	Seniors from upper socioprofessional categories often retired. Importance of family tradition and even religion.	May be very large. Numerous supported causes. Rational and scheduled act.	SPIRITUAL = act of charity Duty, compassion. PLEASURE = act of love	ACTIVE CITIZENSHIP GENEROSITY LIBERALITY SOCIAL RESPONSIBILITY		DIFFICULTY TO MAKE A CHOICE BETWEEN DIFERENT CAUSES
					FEELING OF USELESSNESS	

Source : based on « Les motivations et les valeurs associées au don », octobre 2001 – Sogerm, pour l’Observatoire de la Fondation de France, in S. HILLION, 2006.

In this subtle context of so various feelings, motivations and personalities, trust is the main brake to decision as well as its main factor for potential and existing donors (idea of long-term relations). The latter being like the “clients” of associations, creating and maintaining trust is therefore quite a challenge for the decision makers.

c) *Trust in the employees/employers relations*

The case of trust linking employers and employees is only treated by the HRM researchers (participative management for efficiency), but the relations between voluntary-foreign employers/participants and their local employees find better arguments in the recent intercultural management (cf. 1.2. of this text). What is more, the link between French volunteers (members of the association) and the founders is also original, the financial retribution being absent of the game. Trust is again necessary.

d) *Trust in the beneficiaries/organization relation*

The least academically studied of relations in an international humanitarian association is the one between the structure as a whole (including Western decision makers, their local employees and the donors) and its direct beneficiaries. Nobody seems to have cared so far about the way Dalit mothers (in our case) may consider the action of their sponsors on the path to development. Nor have they noticed how this may influence the small business setting up and management for these poor countries dwellers. This paper aims at presenting at least a part of their vision, which happens to be as relevant as the others in a managerial point of view.

Since trust has to be generated among people from another culture (local employees and beneficiaries), a precise management science may be useful in this case: intercultural management.

1.2. INTERCULTURAL MANAGEMENT: ABOUT MANAGING LOCAL EMPLOYEES

We shall try to make a brief panorama of the main intercultural management contributions that could be of reasonable help in our case.

1.2.1. DIMENSIONAL APPROACHES

Culture and differences were first taken into account in social sciences (especially anthropology, sociology and ethnology from the 19th century, starting with considerations about colonialism). Researchers in management sciences, being mainly originated from *the* international trading country, the US, had first opted for a convergent view of cultural differences in firms. It means that different people were expected to behave the same way and be efficient if they were managed by the right tools.

Yet failures had to be explicated and European researchers started exploring a divergent concept: particularities were to be considered to achieve better results. From this point, different methods or approaches emerged. The most famous ones are dimensional studies (Hofstede 1980-1991; Trompenaars 1993). For the first author (through a huge study inside 55 subsidiaries of the IBM company, in the same number of countries), 4 cultural dimensions had to be brought out: the power distance index (PDI), individualism/collectivism (IDV), masculinity/femininity (IAS) and the uncertainty avoidance index (UAI). A few years later, Hofstede had to add a last dimension, underlined thanks to Bond's work in Asia: the long-term orientation. Trompenaars used the relational paradigm since his cultural dimensions were: relations to the others, to the environment, and way of taking time into account. A North American anthropologist also decided to contribute to the understanding of cultural differences in management, Edward T. Hall (1950s and 1984). He developed the concepts (dimensions) of "high context culture"/"low context culture" before adding his "hidden dimension": proxemics, or personal spaces. Last, he invented the terms of "polychronic" cultures vs. "monochronic" ones.

More recently, theories about “cross-vergence” or the “melting-pot philosophy” have been emerging (Ralston and al., 1997), recommending, as far as managers are concerned, to enable the integration of the different values brought by other cultures, without forgetting one’s own values.

To be precise, another type of intercultural studies has come to develop; they are called interpretative approaches.

1.2.2. INTERPRETATIVE APPROACHES

They have mainly been led, in France, by the CNRS research group Gestion et Société⁶, directed by Philippe d’Iribarne. His *Logique de l’honneur*⁷ (1989) refers to typical behaviours for different nations. The author explains them by historical, religious or political causes. Honour is supposed to be at the centre of the French national behaviour (transposable to professional attitudes and interpretations) whereas consensus would more accurately qualify the Dutch and a contractual view would easily fit the North Americans.

A whole group of researchers has since been investigating other national behaviours⁸ (in different countries of Africa and Eastern Europe), always focussing on the participants’ interpretations and feelings when they are involved in a multicultural management. D’Iribarne (2004) has never stopped emphasising the importance of social sciences (especially ethnology) in management studies and wishes there were studies in more different kinds of organizations and in other parts of the world.

Of course this approach has been criticized. The group is mainly taxed with a difficult generalization since their studies are often concentrated in one firm for each country. But they have never stopped investigating and the members are all specialists of the countries and nations they study. We think this approach is the most appropriate one in the case we have studied. The field has taught us that culture cannot be dissociated from personal and professional relations in India, and especially in charities, where the two kinds of relations are somehow mingled. Here are appearing the limits of the academic literature. The field we have chosen has almost nothing to do with most of the firms studied in intercultural management texts, even though it no longer needs to be proved that humanitarian structures have to use management tools. So, since no contribution about small international charities sustaining Tamil abandoned mothers has been brought out so far, we have tried to analyse a case.

But before presenting it, we would like to make a brief review of microcredit and its legal publically recognized attributions.

⁶ Management and Society.

⁷ *La logique de l’honneur, gestion des entreprises et traditions nationales* (full title). In English *the logic of honour, national traditions and corporate management*.

⁸ Iribarne and al, 2002, 2003.

1.3. MICROFINANCE: INSTITUTIONS AND LEGITIMACY

1.3.1. GENERAL CONTEXT AND RULES

Microcredit is commonly said to have been created by Muhammad Yunus and his famous Grameen Bank from Bangladesh in the 1960s. One of the definitions was published by the Canadian NGO specialized in microfinance Calmeadow in 1999: “*Microcredit refers to small loans for low income people in order to support autonomous work or set up very small enterprises (VSE).*” The report specifies that microcredits are generally issued for particular populations, such as women and minorities.

Yet microcredit is not as recent as one may imagine. It is actually a practice that has been in use for hundreds of years, commonly known under the appellation of “informal finance”, which consists of small loans generated inside and by a community, with the general accepted rule of “each one in turn”. Institutions have come to regulate the undeclared activities of tontines. Consequently, a juridical frame has been designed so far, but against all expectancies, it is not as rigid and complete as one might have thought. Indeed, according to Laurent LHERIAU, Pr. in law (2005), “*institutions of microfinance should comply with the rules applied in the countries in which they work and be controlled by the authorities of these countries*”, but according to the country, such controls may not be organized. What is more, if financial institutions are declared as such and more likely controlled, the matter is quite different when it comes to NGOs practicing microfinance. Mathieu DUBREUIL, from the Microinsurance Department of www.planetfinance.org⁹, states that in France, for instance, the statute that regulates NGOs’ activities (called “loi 1901”) “*only supervises the activities of the headquarters of international associations*” and that the latter “*are supposed to open a local law subsidiary on the field and work with the local institutions*”. This is never controlled and the smallest NGOs can use microfinance as they like, without risking to be controlled or have to account for their activities. Yet for ADA¹⁰, control and transparency are key factors for better abilities and performances, credibility of the sector, efficiency and coordination between loaners and trust for private investors. They warn against possible deviations.

1.3.2. MICROCREDIT CRITICIZED

Microfinance in itself has recently come to be criticized by researchers working in developing countries. Thus Vijay MAHAJAN (2005) claims that microcredit does not improve economic growth in developing countries. He presents five stereotypes or false ideas, often accepted by loaners, according to which:

- Credit should be the main financial service needed by the poor
- Credit should systematically give birth to competitive VSEs
- All the poor want to set up their own business and microcredit can help them

⁹ Interview 2007

¹⁰ NGO from Luxembourg specialized in microfinance. Report 2001.

- Those whose income is just above the poverty line do not need microcredit anymore and offering it to them means choosing the wrong target
- All microfinance institutions can get financial durability

These ideas are dangerous and the avidity for numerous loans is often present in microcredit institutions because their directors think that this is an evidence of efficiency.

Other researchers, like those from the French Institute of Pondicherry (IFP), are trying to warn against the risks of microcredit. Indeed, as states HELIES (2006) if success is not met, what is it but another credit on very poor persons, often already heavily indebted? Because a microcredit generally comes in addition to others from the informal finance, which is still very active in India... Jean-Michel SERVET (2005) explains that excessive debt is the main risk of microfinance and that microcredit cannot eradicate poverty by itself. Thomas Dichter (2005) even declares that nobody should interfere in the already auto-sufficient process of the informal finance.

1.3.3. MICROCREDIT IN INDIA

Microcredit is quite used in India, whether through institutions or private associations. Demand is high: only 30 per cent of rural dwellers and 50 per cent of city dwellers have a bank account (FOUILLET and PALIER 2005). In Tamil Nadu, only 25 per cent of families have access to bank accounts. Most of the microcredits (65 per cent) are offered to groups (Self-Help Groups or SHGs) and 20 per cent are offered through the Grameen model. Only seven per cent of the loans are individual. The association in which we worked used the individual microcredit.

2. *METHOD AND LIMITS OF OUR CASE*

As a student in two International Business Masters, we arrived in India with a relatively solid knowledge about the country, its history, culture and economy. Previous studies in humanitarian associations (French Red Cross, among others, HILLION 2006) were supposed to help us deal with the situation. Yet we had not foreseen how complex the context could be. As soon as we were involved in the daily activities of the organization, we felt that we would have, before anything, to do our best to settle trust conditions to get as much information as possible. The human factor or relational paradigm was immediately tangible, as well as tensions. We thought that communication with the French members and decision makers would be easier thanks to, precisely, cultural proximity, and the fact that *they* had recruited us for an internal audit. Yet it happened that most of the time, these people were the ones who tried to hide information from us.

And against all expectation, relations with Indian people happened to be much easier, provided that they understood that we had nothing to do with decisions about money. From this point, and thanks to the local employees who immediately understood our goals and expectancies, we were carried among

Tamil families, listening to them and trying to understand them. Trust had to be at the centre of our work because it was at the crisis' one. We noticed that seeing us eager to discover¹¹ an actually unknown and so different culture was deeply appreciated; sharing experiences and ideas about the differences and similarities of our cultures contributed to settle a mood of trust and respect. We have to precise that the whole process might have been more difficult if we had not been ourselves Mother, accompanied by an Indian-like nine-year-old open-minded daughter. To summarize it all, we decided to play the part of a constructivist researcher¹², deeply implied in the field, trying to find solutions with the participants. We mainly used interviews (open and informal interviews, followed by semi-directed ones) and observation. We had to be curious but Indian people are curious themselves and like to be asked questions. Whereas French participants, led by their honour (one person for one job and nobody is supposed to know better what to do or make remarks), found it hard to open themselves as much. To enumerate the limits of our work, we would say that time was not long enough (in India, time is not really counted, you can do tomorrow what you will not do today; but ours was counted indeed); trust is a trap (we collected information from participants that could absolutely not be revealed to the others, however crucial it might be); crisis and researcher are not friends (the very crisis situation seemed to make our presence quite a burden sometimes and we had to deal with some modifications in our contract, like, for instance, a newly forbidden access to official documents¹³).

The following table includes the methods used for our case study (tools, targets, goals and results in the original text).

¹¹ We accepted to be dressed like Tamil ladies, to eat all their meals and beverages, we went to temples, functions and took part in many other traditional Indian activities.

¹² French management researchers have recently emphasised the usefulness and risks of such a paradigm (Plane, 2005).

¹³ Which we actually could see thanks to the Indian employees, but without being able to use them in our memoir, lest we might lose our colleagues' trust and put them into trouble.

F2.

METHODS

Technique	Targeted protagonist	Goal	Result
Observation	On-site employees (Indian team from the Pondicherry office)	Understanding real-life working conditions/management	IN-HOUSE AUDIT
	beneficiaries	Estimating the caregiver/care-receiver relation	
Official documents analysis	Managing team (France and India)	Finding the strength and weaknesses in the <i>international management</i>	IN-HOUSE AUDIT
Interviews : Informal/open	On-site employees	Setting trust/detecting relevant ideas from the actors	IN-HOUSE AUDIT
	Managerial team		
	Professionals from the nonprofit/microfinance sectors	Getting <i>critical professional points of view</i>	ETUDE MARCHE
Informal/semi-directed	Donors	Emphasizing expectancies	IN-HOUSE AUDIT ET PRECONISATIONS
	Managerial team	Checking the management practices	IN-HOUSE AUDIT
Informal/semi-directed	On-site employees/full team from a competing association	Getting a personal and subjective approach about management	IN-HOUSE AUDIT /ETUDE DE MARCHE/ PRECONISATIONS
	beneficiaries	Getting their points of view/feelings upon the help they receive	IN-HOUSE AUDIT ET PRECONISATIONS
Formal/open	beneficiaries	Emphasizing expectancies to manage the crisis	IN-HOUSE AUDIT ET PRECONISATION
Formal/semi-directed	Donors	Understanding discontentment to manage the crisis	
	Professionals from the nonprofit/microfinance sectors	Finding solutions for the crisis		PRECONISATIONS

Source: Hillion (2007)

3. *A 3D CRISIS AGAINST BUSINESS SUCCESS*¹⁴

Before anything, a quick explanation of the running of the association, which we shall call CD¹⁵, seems necessary. The structure was created in 2004, on the occasion of the Tsunami. Actually, CD and another association of the same type emerged from internal tensions in a first French association which had been working among Tamil Dalits for more than twenty years. According to the manager¹⁶ of the first association (still existing), the local employees of CD and other French professionals from Pondicherry, the future president of the new structures wanted more recognition and “*power*”¹⁷. Mrs S, the Pondicherry Indian office manager and our main interlocutor in India, also left the first association to work as an office manager in CD.

Before leaving France, we had been told that “*little problems*” were disturbing the running of CD. The President of the time was temporarily playing this part because the founder (who was in Pondicherry

¹⁴ Since most of our research work was based upon interviews, we have included typical questions asked as an appendix at the end of this paper.

¹⁵ The managers of the association have decided to remain anonymous because they were not fully satisfied to see their organizational attitude revealed. The association mainly deals with sponsorships and donations which support a microcredit sector. The latter was audited by the author and proved to be partly inefficient because of a lack of control and professionalism.

¹⁶ He prefers to remain anonym when cited in this context.

¹⁷ From this point of the paper, all the words written in italics and between inverted commas are words which were accurately pronounced by interviewed people.

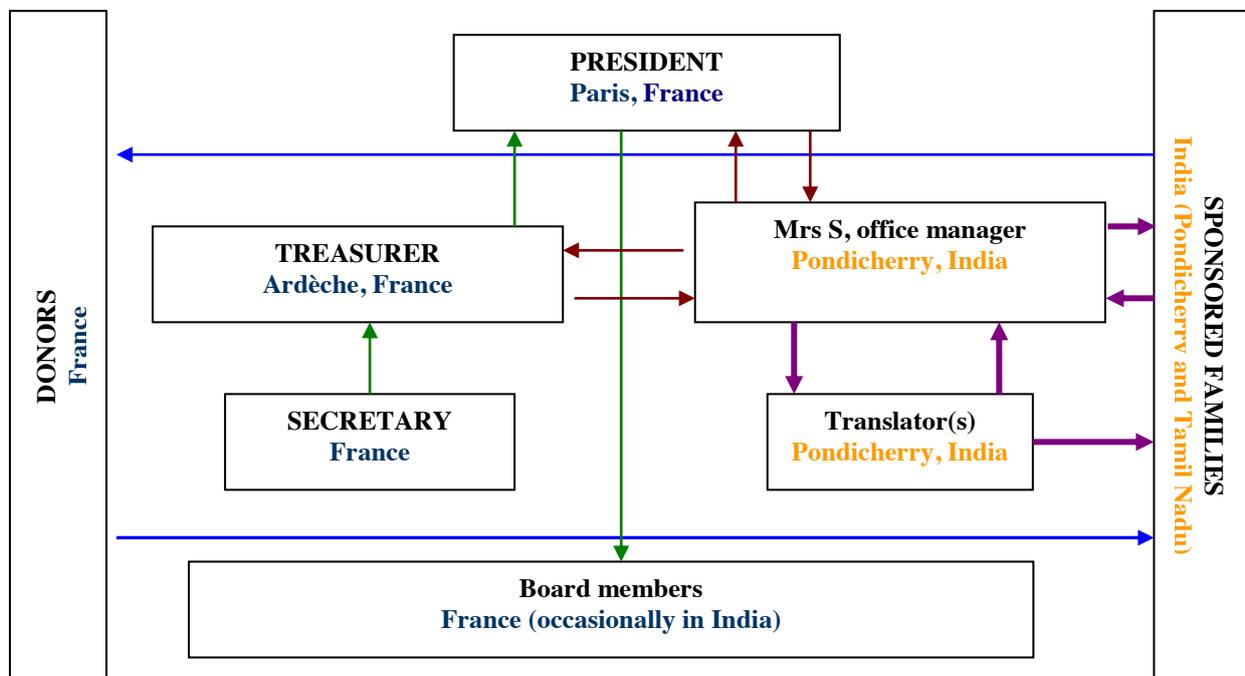
for five months) had been accused of being “*too personal*” in her management. The President and treasurer asked us to make weekly reports about the situation in India, which they found difficult to analyse from France. We were also told that a secretary was probably on the site as well.

The following figure represents the organization of the structure and the relations that take place in it. CD quickly passed from an emergency mission (Tsunami) to a more long-term one by offering monthly sponsorships to the poorest Tamil ladies and their children. When we arrived in India, 76 families were sponsored. The “contract” implied generous donors, expecting a long-term relationship with poor beneficiaries through monthly letters including news from children and photographs. A recent microcredit sector had been created upon the decision of the founder. 19 ladies had already been benefiting from its services for several months. They had set up their own businesses as tailors, recycling agents or mobile fast-food managers. All of them had to feed several children (up to six) and pay their school fees. Their main expressed goal was to give them a better life than theirs.

Mrs S and the local translator (a Tamil French-speaking woman) were supposed to manage the Indian office all year long, but the founder and other members of the charity or some donors regularly went to the field, with a mission of control.

F3.

ORGANIZATION OF THE CHARITY AND ITS RELATIONS



Internet relations

Epistolary and/or financial relations

Phone and/or direct relations (board meetings)

Direct relations

Source: Hillion (2007)

We quickly considered a double crisis involving the full team of CD and the donors who might not be fully satisfied of the service if such tensions existed. But we were far from imagining that a third dimension of the crisis was making it unique in management: the interpretations of the beneficiaries.

3.1. INTERNAL BREAKDOWNS: TRADITIONAL HMR DIFFICULTIES AND INTERCULTURAL/TECHNOLOGICAL HIATUS

It was not hard to understand that an internal crisis was going on from what we had been told in France. But working in the Indian office enabled us to understand the different breakdowns from a more practical point of view. One person in particular, the founder of the charity who was no longer supposed to take decisions, happened to be indeed a very personal character. All the other members were thus disturbed in their roles, whether the French ones or the Indian ones, for whom difficulties were even greater given a lack of understanding a different managerial culture. Inside the first dimension of the crisis, three other dimensions emerged. The crisis in the crisis...

3.1.1. UNILATERAL MANAGEMENT AND LACK OF INFORMATION

Despite the voluntary status of most members in such structures (i.e. French members and founders), a unilateral management and lack of internal communication (about decisions mainly) led to trust disruptions inside what was supposed to be a team¹⁸. Indeed as soon as we arrived in India, we could notice that the former president was actually still behaving as if nothing had changed in the association. She would take important decisions without consulting anybody in France (like authorizing sponsorships and microcredits); she would present herself as the President of a French humanitarian association in local French parties including diplomats; and, worse of all, she would use some money from the association to finance personal needs (a scooter, petrol, massages and swimming-pool subscription). Her relation to Mrs S also seemed essential to the founder since the Indian employee was aware of everything, translating when necessary (in the banks, for instance) and providing no information to any other French member. The founder would often gossip about the latter, suggesting that they did not trust Mrs S whereas *she* did fully.

We did try to organize interviews with the founder of the charity. As long as they would deal with humanitarian activities as a whole or poverty in India and among women, she would be the most eager person to answer. Yet as soon as managerial topics were suggested, she would invariably repeat that this was “*none of [our] business*” and that she had “*experience like nobody else*”. Such behaviour could not possibly lead to full trust inside the team, all the less as mistrust seemed to be at the centre of the founder’s attitude.

¹⁸ We would like to precise that none of the following statements should be considered as a personal judgement or lack of respect. We are only trying to give a summary of what we took down as accurate as possible. What is more, we think that in spite of what is revealed in this paper, CD is useful to poor people in India.

3.1.2. *SUSPICION AND GROUPS IN FRANCE*

Interviews of French members¹⁹ highlighted the fact that trust can be severely damaged if they are not fairly considered as part of the development aid mission of the whole organization, however far from the field they might be. Email or virtual interviews emphasized that the very goal of people (often retired) in such associations, since there is no financial remuneration foreseen, is “*involvement*”. They need to feel “*useful*” and “*active*” in return of their professional participation. But if they do not get the necessary information to be efficient and feel excluded from the very actions and results of the common work, they become “*resentful*”.

Among the French members, suspicion had become part of the job, groups appearing and developing their own theories about the organization, without communicating their ideas to the team. The crisis was being born inside the structure through a kind of vicious circle.

3.1.3. *INCOMPREHENSION, NO TRAINING AND ISOLATED MANAGEMENT IN INDIA*

The very fact that a part of the crew is physically situated in a France when the other is in India implies communication tensions, all the more as local employees (Indian women for file management and translation) are not correctly familiarized with the tools (computer and Internet mainly). It is important to precise that they are not trained managers or secretaries. Mrs S and the translators are coming from the same social group as the women helped by the association. They have lived the same difficulties and traumas (conjugal violence, abandonment, rejection from their families or neighbours) and they are sponsored by CD or, in the case of Mrs S, by the first charity from which CD was created. Only, they speak English and/or French and are trying to analyse what they have lived to make other women change things for their children.

So when they get different instructions everyday (until 30 mails per day), sometimes repeated, often contradictory, in foreign languages (some members write in French to Mrs S, hoping for the translator to give clues in Tamil) and through an unknown machine, they feel “*lost*”. They gradually come to judge the whole organization as a “*big problem*”, repeating continually the explicit sentence “*I don't understand*”. Since they have to keep on working without definite orders, they sometimes take formal decisions (authorizing a sponsorship for a desperate woman with an ill child who needs medical care urgently, maintaining another one for a woman who does not correctly refund her microcredit, etc.) without telling the Westerners because they do not trust them fully anymore.

Interviews also brought out another factor of distrust emergence: uncertainty. The local employees have no legal job contracts and when we were on the field, we saw a translator dismissed without any more formality because she was judged “*unprofessional*”. Mrs S expressed a deep feeling of uncertainty and therefore stress about her own professional situation. This urged her to “*hide things sometimes*” and

¹⁹ Secretaries, accountant, president, informal participants, by email or direct interviews (one of them was in India when we arrived).

“mistrust French people” who are “not like us”. She strongly emphasized the fact that French behaviours were “choking” to her, that they did not “behave correctly” (the sentence “It’s not correct” was one of the most repeated in the Indian interviews). Culture differences were obviously at the heart of the trust breakdown.

If we consider the whole situation, to which structural changes were suddenly added (crew reshuffle, merging with another association), it is easy to notice the emergence of distrust.

3.2. IMAGE OF THE CHARITY AND NEED FOR PERSONAL INVOLVEMENT: DONORS LOSE THEIR TRUST

3.2.1. SETTING TRUST WITH DONORS

To collect data about the donors’ feelings and expectancies, we also had to try to create a mood of trust in our relations. We knew that distance would not facilitate the idea (emails would be our main tool of communication), but knowing their fondness for proximity (Cerphi 2005 and Hillion 2006), and given our polyvalent role in the structure, we decided to be at the donors’ service and let them know it. In agreement with the President of the time, we sent a collective mail to all the donors, explaining our situation and mission in the association and offering our full disposition for them (information, news from families and India, etc.). As we were also in charge, with Mrs S, to organize a yearly meeting between the charity and its beneficiaries, we took the opportunity to make donors feel like they had been with us by writing a short-novel-like article relating the whole day, including pictures and dialogues.

Our surprise was big when we received dozens of mails from eager donors thanking us for making them take part in the process they sustained. But these mails also contained (as we had expected) lists of grievances.

3.2.2. FRUSTRATION AND RUMOURS KILLING TRUST

People who give money to small charities generally recognize that they more easily trust such structures than big ones because they both look closer to them and may take them closer to the beneficiaries. The concept should be successful and satisfying: a French person sponsors a desperate Indian family, keeps contact with them through letters and follows the children’s evolution and education.

However, the same unilateral management of the whole project, added to the fact that the members are often donors themselves and bring their friends to be donors in turn, lead to the same reaction: suspicion, commentaries, creation of groups of distrustful people. This is all the more injurious as these people are, in a way, the “clients” of the association, i.e. the latter lives on their money.

In our case, communication with donors showed that the lack of information (about what their money is really used for, about the changes applied in the structure) creates a lack of trust in them: why should they keep on giving money (many of them are not the richest French citizens) if they cannot take part to the process of development aid? From this point, suspicions of fraud or any kind of illegality

emerges and becomes more and more present in their minds. It is not long before they decide to quit. In four months, the crisis developed so much as to lead to more than 15% of departures.

Practically, resentments were about a lack of information whereas this is precisely what had been promised to them when they subscribed. The relation between the charity and its donors appeared like family relationships, quite informal: donors had indeed given their trust before the crisis took place and they felt “*betrayed*” and “*frustrated*” when they understood that their expectancies would not be fully satisfied. The words they used to say so (“*my family*” about the sponsored family, “*I like her so much, but...*” about the founder, etc.) were very sentimental and disappointment was all the greater.

Therefore the association was facing an internal crisis (an HMR crisis) as well as one with donors, which could be called a crisis with “clients” in a commercial structure. But what about the “product” sold? Has a product ever been asked anything? The word may sound harsh but it is realistic. What CD sells is not exactly poor people but, to be less prosaic, an opportunity to accompany poor people on the way to development.

3.3. SUSPICIOUS AND UNCONTROLLED BENEFICIARIES: DISTRUST AND FAILURES IN SMALL BUSINESS

When we started talking about our analysis of the situation with CD decision-makers, the word “product” clearly shocked them, they said that the beneficiaries were human beings and nobody could call them “products”. Yet we had to show them that they had actually considered them as product more than human and thinking beings so far since they had not even thought of asking them about their opinions or representations of the association. The decision makers were quite surprised of our results.

3.3.1. ANOTHER PARTICULAR RELATION

The idea of being “*a divinity*” (cf. Appendix) for the beneficiaries of development aid in the case of the founder may be laughable at first hearing but it not utterly unfounded. Indeed during the interviews, the Tamil mothers would call the founder “*Ayah*” (a familiar nickname for grandmothers²⁰), which implies some fondness, and refer to her as the one who has saved them, which implies much respect and a kind of devotion indeed. They also called her “*the boss*” and they kept repeating that “*she decides*”.

This particular relation, without real authority, actually makes the whole organization frailer than it should be. Indeed, fondness and devotion must be quite pleasant, but they are feelings expecting to be satisfied, not betrayed. The “*boss*” who “*decides*” does not mean that the beneficiaries recognize authority. It means that they have understood what is going on inside the structure.

3.3.2. LOSING TRUST

Informal interviews are much more relevant than formal ones when Tamil ladies have to express themselves. Indeed, the formal ones were held in the CD office and each person had been called to do so.

²⁰ The founder is a retired woman in her early sixties.

They were shy and quite respectful because it seemed to them that we had become part of the association and nothing bad should have been said. Yet we kept repeating that we were not involved in the structure and that our aim was to understand and help them.

Used to seeing us every day or every week, the ladies eventually came to speak to us by themselves (asking Mrs S to translate). The recent departure of the founder also seemed to soothe the atmosphere, whether for the management team or the beneficiaries. The latter thus came to see us and started talking about “*Ayah*”, first joking about her way to wear Tamil dresses and flowers in her hair, then slowly coming to the very fact of the crisis. Indeed, they would regularly ask questions to Mrs S to know if they were right (“*The association is in trouble, isn’t it?*”, “*Why do they forget my sponsorship?*”, “*Are you going to lose your job?*” etc.). They complained about changes implemented by the founder (like Tamil lessons for illiterate but already overworked women or Aids programs led by men) and expressed their fears and mistrust. Devotion was not clearly at its climax then.

3.3.3. BEHAVING LIKE MODERN CONSUMERS

The beneficiaries themselves thus happened to notice the whole process of breakdowns inside the helping structure and changed their judgement about it. After considering it as a “providential” opportunity to try to get out of poverty, they realized that their questions (about change, about the donors, about the money they get) could not be easily answered by the French decision-makers, that the local Indian employees themselves were kind of lost in their responsibilities and that nothing sounded quite solid or stable in the association.

Given to the number of other French charities, we learnt that the beneficiaries were starting comparing services and uncertainty emerged here too. They said they need the money they got from the association and they feared they might lose it if the structure collapsed. They did not trust French people anymore and tried to find help among competitors. The case was particularly true about microcredit. The beneficiaries of sponsorships who had asked for microcredit but were constantly postponed started considering other options to find the money needed to set up their business. One of them, for instance, had to borrow money from her husband’s family because she had no other solution. This case is isolated but far under the goals of empowerment and development claimed by the association: after getting this money, the very woman was financially and morally dependant again on a violent husband whom she had managed to leave before...

3.3.4. *WHEN ROLES ARE INVERTED...*

Another paradoxical consequence of this disruption is the sudden laxity of the Untouchables. Indeed, as months were passing (and there were no more French managers to check anything²¹) it seemed they no longer feared their attitude might make them lose the money they were attributed (because the decision-makers were in trouble already) and did not come as often as before to refund their loans or write letters to their sponsors (who, in turn, were resenting the association for not giving news from their Indian families). They did not play their part anymore and actually, roles happened to be inverted: the members of the association could no longer be the decision-makers if they were losing their “products” and “clients” were not satisfied.

3.3.5. *RESULTS AND IMPACT FOR SMALL BUSINESS*

The lack of control and rigor in the management of the whole structure as well as the microcredit sector proved to impact the success of the created business in a negative way. Files, or “business plans” consist in filling one single sheet of paper, hardly stating what the business will be and never calculating rates. Credits are allocated on the sole basis of sponsors’ acceptance, not on the relevance or viability of the professional plan. Controls are made through email reminders to ask beneficiaries for refund.

The general refund rate hardly reaches 50 per cent and most of the beneficiaries remain under the poverty rate after setting up their business. This is not mentioned in the association’s documents, the money does not always go to the original plans. Knowing that their activities are not controlled, the ladies sometimes use it to refund other debts or to help their families. Sometimes, they buy presents for functions or their children. When they borrow money from an informal organization and do not refund correctly, they know that “50 to 100 persons can come and embarrass a bad payer in her own house, even indeed temporarily keep her from getting out of it” (Ghate 2006) and humiliate her publicly. With Western associations, this will not happen.

On the other hand, some ladies feel so much pressure from the sponsorships that are not regularly allocated and the loan they should refund anyway that their business is not as efficient as it could be. The permanent uncertainty is also a brake to success.

Of course some cases are quite positive and most of them show that the businesses generate a better income (even if it not enough). It depends on the borrower’s equity and motivation, mostly. The most serious files (regular refund, better way of life thanks to the business and gratitude to the association) show that a whole family can live on a small business set up with microcredit. Unfortunately, when the successful women ask for a second credit in order to develop it and keep on following the path of development and empowerment, it is refused under the pretext that “now she is not in need anymore”. Dynamism is killed before being born.

²¹ Surprisingly enough, during the very hot and humid season in India, most French people go back to their warm villas in France...

CONCLUSION

This 3D crisis has enhanced different reasons for its existence (too much familiarity, lack of professionalism and coordination) as well as new and unexpected strengths of pressure which have led to an incredible situation of inaction and inefficiency. Various recommendations were made in the final report, but almost none have been used. We have recently learnt that after our departure, more than 60% of the crew had to be reshuffled (mainly because of resignations) and that the merger with another association based in Madagascar did occur (which we had strongly advised against), given that the structure was not prepared. We have kept contact with Mrs S (secretly because her boss does not want her to) and she has informed us that these big changes have generated even more mistrust among the employees, the French people and, of course, the beneficiaries. The microcredit sector, which should have been directed by a professional, has been maintained, but more than 20% of loans are still not regularly refunded.

We think that the trust breakdown of this case could have been, if not avoided, at least attenuated, if culture differences had more been taken into account. To conclude, let us not forget that such organizations may be upsetting indeed, but useful all the same at an individual level. No one can deny that the more money poor people get the better for them. But this idea does not really fit the necessary goals of dynamic small businesses in developing economies. We sometimes wonder whether dynamism in small business generated thanks to these charities' help is not considered as a threat to their existence...

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After completing two Master Degrees in Management and International Trade specialized in Trade with Emerging Economies and Research about the Internationalization of Trade, I decided to keep on investigating the field of the internationalization of non merchant activities, especially in developing countries. My thesis is about cross-cultural management as a strategy for very small Western humanitarian associations working in developing countries. My studies are still about Indian employees and beneficiaries in such structures and their representations in this context.

BIBLIOGRAPHY

- ADA (2006). “Conclusions du programme pilote Initiative Européenne d'évaluation de performance des IMF africaines”, *BIM* n° 142
- ALLOUCHE, J. and AMMAN, B. (1998). “La confiance: une explication des performances des entreprises familiales”, in *Economies et Sociétés, Sciences de Gestion*, 8/9, 129-154.
- CALMEADOW (1999). “Community Micro-loan Funds in Canada”, 198 pp.
- CERPHI (Centre d'études et de Recherches sur la Philanthropie 2005). *La Générosité des Français*, 10th edition, by Jacques MALET, for Union pour la Générosité.
- COLEMAN, J. (1990). *Foundation of Social Theory*, Cambridge, MA, Harvard University Press.
- DICHTER, Thomas (2005). “Hype and Hope, the worrisome state of the microcredit movement (microcredit : all dressed up and no place to go)”
- DUBREUIL, Mathieu (08/20/2007) from the Microinsurance Department of planetfinance.org, virtual interview.
- FOUILLET, Cyril and PALIER, Jane (2004). “Assessing the impact of microfinance in terms of empowerment: Issues and challenges”, in Guérin, I. and Palier, J., *Microfinance challenges: empowerment or disempowerment of the poor?* Institut Français de Pondichéry, Collection Sciences Sociales, 10, 215-238.
- FUKUYAMA, F. (1995). *Trust, the social virtues and the creation of prosperity*, New York, the Free Press.
- GHATE, Prabhu (2007). *Microfinance in India, a state of the sector report, 2006*, CARE and Ford Foundation, New Delhi, 172 pp.
- GURVIEZ, P. (1998). “La confiance du consommateur dans la marque : conceptualisation, mesure et management”, 14th Colloquium of the French Association of Marketing, Bordeaux, 73-96.
- HALL, E.T. (1984). *The dance of life, the other dimension of time*, Anchor Books, 250 p.
- HELIES, Ophélie (2006). “Du surendettement à son traitement : micro finance et macro enjeux” IFP CIRAD, 128 pp
- HERMAN, R.D. and RENZ, D.O. (1999). “Theses on nonprofit organizational effectiveness”, *Nonprofit and voluntary sector Quarterly*, 28, 2.
- HILLION, Sarah (2006). “About internationalisation of humanitarian activities at a regional scale, case of the Vauclisian French Red Cross”, Master dissertation, University of Avignon and the countries of Vaucluse UAPV, 132 pp.
- HILLION, Sarah (2007). “Gestion de crise dans le cadre de la transmission de l'aide internationale au développement, application au cas de CD, Pondichéry, Inde”, Master Memoir, UAPV, 140 pp.
- HOFSTEDE, G. (1980). *Cultures' Consequences: International Differences in Work-Related Values*, Beverly Hills: Sage Publications.
- HOFSTEDE, G. (1991). *Vivre dans un monde multiculturel, Comprendre nos programmations mentales*, Les Editions d'Organisation, 351 pp.
- IRIBARNE (d'), P. (1989). *La logique de l'honneur: Gestion des entreprises et traditions nationales*, éditions du Seuil, Paris, 280 pp.
- IRIBARNE (d'), P. and al. (2002). *Culture et mondialisation, gérer par-delà les frontières*, Seuil, 357 pp.

- IRIBARNE (d'), P. and al. (2003). *Le Tiers-monde qui réussit, nouveaux modèles*, Ed. Odile Jacob, 288 p.
- IRIBARNE (d'), P. (2004). "Face à la complexité des cultures, le management exige une approche ethnologique" *ABI Inform. Global, Management*, 11-19
- KARPIK, L. (1996). "Dispositifs de confiance et Engagements crédibles", *Sociologie du Travail*, 4, pp. 527-550.
- LANE, C. and BACHMANN, R. (1996). "The social constitution of trust: supplier relations in Britain and Germany", *Organization Studies*, 17, 3, 365-395.
- LHERIAU, Laurent (2005). "Réglementer la microfinance: un état des lieux" *BIM*
- LUHMANN, N. (1988). "Familiarity, Confidence, Trust: problems and alternatives", in *Trust: making and breaking cooperative relations*, Gambetta, 94-108, New York: Basil Blackwell.
- MAHAJAN, Vijay (2005). "From microcredit to livelihood finance", New Delhi
- MAYER, R.C., DAVIS, J.H., and SCHOORMAN, F.D. (1995). "An integrative model of organizational trust", *Academy of Management Review*, 20, 3, 709-734.
- MOLLER, K. and HALLINEN, A. (2000). "Business relationships and networks: managerial challenge of network era", *Academy of Management Review*, 28, 5.
- MORGAN, R.M. and HUNT, R.D. (1994). "The commitment-trust theory of relationship marketing", *Journal of Marketing*, 58, 20-38.
- PERRIN, Christelle and ABBES, Molka (2005). "La confiance au cœur des relations bailleurs/ONG", AIMS Conference, 21p.
- PLANE, J.M. (2005), "Recherche-action, méthode d'observation et management stratégique", AIMS Conference.
- RALSTON, D.A.; HOLT, D.H.; TERPSTRA, R.H., and KAI-CHENG Y. (1997). "The Impact of National Culture and Economic Ideology on Managerial Work Values: A Study of the United States, Russia, Japan, and China", *Journal of International Business Studies*, 28(1), 177-207.
- RYAN, W.P. (1999). "The new landscape for nonprofit", *Harvard Business Review*, 77, 1, January-February, 127-136.
- SERVET, Jean-Michel (2005). *Microfinance challenges: empowerment or disempowerment of the poor?*, IFP
- SIRIEIX, L. and DUBOIS, P.L. (1999). "Vers un modèle qualité satisfaction intégrant la confiance?", *Recherche et Application Marketing*, 14, 13, 1-21.
- THIERY, P and PERRIN, C. (2004) "Recouvrement de champs d'activité entre ONG et entreprises : partenariat ou concurrence ?", Frontières Colloquium, IAE, Toulouse.
- TROMPENAARS, F. (1993). *Riding the Waves of Culture: Understanding Cultural Diversity in Business*, London: Economist Books.
- WILLIAMSON, O.E. (1993). "Calculativeness, Trust and Economic Organization, *Journal of Law and Economics*", 36, 453-486.

APPENDIX

Typical questions asked during interviews and their main answers.

1. With CD members

- French members
 - *What is going on in CD? The point is, some people do not play a humanitarian role for humans but for themselves. We are fed up with egoism.*
 - *What are your requirements? Information, above all, because if we don't know what is being done in India, our work is totally useless in France. What is more, we clearly feel like we're not part of a team, but just tools for CD to exist legally.*
 - *Informal requirement (in a taxi, after visiting families, this member had quarrelled with the founder): I hope you will write everything that does not work all right in you report, so that she may understand how we feel.*
- French founder
 - *What do you think about the recent resignations in CD? They are stupid people, they do not know humanitarian activities.*
 - *What are your feelings about the donors who say they can no longer trust you? You're talking nonsense, only a few of them have been negatively influenced. Otherwise, they all love me.*
 - *What about Tamil ladies not refunding their loans? They think I am a divinity for them, they will always do what I say is good.*
- Indian employees
 - *How is your job? I love my job because thanks to it I can raise my children alone. Also, I can help women like me, suffering with their husbands. CD saves our lives.*
 - *What do you feel about the way CD is managed? You know sometimes it is difficult, because Madam C says something, then Madam D says something else. I don't know what to do, I don't understand.*
 - *What do you think about Mrs C firing the translator? This is not correct. I don't know why French people behave like that. They say things and then they don't do things. I know the translator was not a very good woman but I also know that her family is in a very poor situation, so I have kept her daughter's sponsorship. But please don't tell Madam C.*

2. With donors

Most complaints did not need questions to be expressed. They came after we took contact with them by mail. With some donors, we kept this contact to go further in their feelings. Here are some of their most relevant resentments.

- *I feel betrayed because I trusted this charity, I have not much money, but I wanted to help poor people. CD does not give me what I want.*
- *I will not keep on sustaining an association without moral.*

- *Sometimes I consider quitting CD because I feel like I'm naïve and stupid. I wonder what they do with my money. But I know my family needs me and I cannot leave them alone.*
- *You know, I have known her [the founder of the association] for a long time and I like her so much, indeed, but she has disappointed me too much in this case.*

3. With beneficiaries

Questions were asked in English to Mrs S and translated into Tamil. We had first taken time to settle trust (Mrs S had explained our purpose and interviews were led only three months later, when the beneficiaries got used to seeing us and had even invited us in their houses). Questions were regularly repeated and rephrased.

3.1. Formal interview

- a. What do you think about foreign associations like CDI? What do you think about what they do? You can speak freely about good *and* bad things.

Embarrassed laugh

It is useful for the education of children.

French people want to help poor families.

Ayah is the boss of this association.

- b. What do you think about microcredit? Please feel free to express all your views.

I earn money with it.

Nothing, I don't know.

It is good for women.

- c. In your opinion (and if you could do it), what should be changed in the help you benefit from?

Embarrassed laugh

I don't know.

Nothing.

Everything is ok. *Evasive stare*

- d. What do you know about CDI? About CDM?

- **Ayah is in charge of it / S is in charge of it / It is for education / Nothing**

- ***Incomprehension***

- **I don't understand / I don't know what to say.**

3.2. Informal interviews

- *Is there anything you would like to say about CD? **What they do for us is very good, I swear it. But the French people always say this and that and we don't understand what they want. Sometimes they shout at me because I don't write letters each month. But I work very hard and I have five children. And when I come, there is no translator, I am asked to come back next week.***

- *What about the help they give?* **It is absolutely necessary; I would be in terrible trouble if I did not have it. But I've got a friend who is sponsored by another association. She gets more money and the French people are very nice, they don't oblige her to come too regularly. And the association is an old one, there is no problem. Sometimes I think I will ask them a sponsorship...**
- *What do you think about Tamil courses which will take place next year?* **We won't have time. We work all week long and when we have time, we want to spend it with our children.**
- *What about the Aids program which took place last year?* **I did not like it because it was held by a man. I don't want to speak about such things with a man. Those French people are crazy.**

Using Business Model Visualization to Highlight Entrepreneurial Value Creation

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Entrepreneurs face the unique task of designing a strategy for their new venture from scratch. A "business model" is a useful concept in this context, because it focuses on the strategic network necessary for start-up success. To support the strategy design process and to extract and visualize the venture's value proposition, we develop a "Business Model Dynamics Framework" tailored for employment in strategic entrepreneurial planning. Using this framework with 25 start-ups and 50 existing ventures, we demonstrate the existence of business model patterns (both of development and of structure) and analyze the framework's usability by entrepreneurs for business model design.

Track: 2. Small Business in Developing & Transition Economies

The Regional Determinants of New Firm Formation in Transition Economies: The Evidence from Uzbekistan

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This study analyzes regional determinants of new firm formation in transition economy. We use database of sub regional units of Uzbekistan from 2004 to 2006 to investigate the relationship between restructuring of state-owned enterprises and new firm formation at the regional levels. The results from random-effect panel data regression models show that regional factors associated with demand and cost, the level of agglomeration, and industrial structures are crucial in determining new firm formation, and new firm formation rates increase significantly in regions where there has been substantial restructuring of state-owned enterprises.

Track: 2. Small Business in Developing & Transition Economies

Entrepreneurial Capital, Social Values and Islamic Traditions: Growth of Women-Owned Enterprises in Pakistan

by Muhammad Azam Roomi

Abstract

This ground breaking study seeks to explore the variables contributing to the growth of women owned enterprises in Islamic Republic of Pakistan. Based on previously established multivariate model, it uses two econometric approaches. First by classifying variables into predetermined blocks and then using the general to specific approach. Statistical analyses and in-depth interviews confirm that women entrepreneur's personal resources and social capital have a significant role in their business growth. It further discovers that moral support of immediate family, independent mobility, and being allowed to meet with opposite gender play a decisive role in both sales and employment growth of women owned enterprises in an Islamic country like Pakistan.

Introduction and Objectives

Internationally, research suggests numerous gender differences among business owners at personal, professional, and institutional levels (Young, 1997; Brush and Hisrich, 1999; Carter et al., 2001; Brown et al., 2002; Orser and Riding, 2003). By implication, these differences become manifold in Islamic societies where women are further discriminated against and subjugated due to socio-cultural values and traditions in the name of religion (Roomi and Harrison, 2008). In such societies it is difficult for women to embark upon entrepreneurial initiatives. Those who are brave, courageous or fortunate enough to do so face additional barriers to grow their businesses.

The research investigating women-owned businesses has developed considerably over the past two decades. Most of the women's entrepreneurship development theories have emerged primarily from research carried out in developed countries with specific social norms and values regarding women's participation in economic activities. There is a dearth of studies conducted in different social contexts especially in Islamic societies, where social and familial control over women; their economic dependence on men, and restrictions on their mobility determine the differential access that males and females experience concerning education and other key supporting services. This raises the concern about the applicability of women's entrepreneurship establishment and development theories and models, mostly

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developed in the Western societies; and challenges the extent to which these theories apply to women's entrepreneurship development in Islamic countries such as Pakistan, Iran, and Afghanistan.

As there is not even a single study conducted so far, focussing on factors contributing to the growth of women-owned businesses in Pakistan (Roomi and Harrison, 2008). This study is an attempt to fill this gap. The main objective of conducting this study is to create an understanding of the factors influencing the growth of women-owned businesses in Pakistan, given the barriers of gender and socio-cultural norms.

Theoretical Framework

Factors Contributing to Growth in Enterprises

There is a general consensus that growth in enterprises is a complex process, which is neither linearly continuous nor dependent upon only a limited number of factors (Smallbone et al., 1995; Deakins, 1996). While various studies recognise the importance of the availability of financial, human, and social resources; technical and management skills that can adapt to and cope up with a changing environment; the potential to develop staff; and creativity and opportunity recognition as the key factors to determine the growth of enterprises, there remains an absence of a comprehensive theory to explain which small firms will grow, or how they grow (Bridge et al., 1998).

The literature mainly describes factors thought to influence small business growth in two categories. The first comprises entrepreneurs' characteristics such as behaviour, personality, attitude (Storey, 1994); their capabilities, including education and training that create higher expectations in some industry sectors (Henry et al., 2005); and their social capital which influences access to resources (Brush et al., 2004). Other entrepreneurial factors identified by (Storey, 1994) are previous management experience, family history, functional skills, and relevant business sector knowledge. None of these, though, has been shown conclusively to constitute a universal success factor. The second category of the factors influencing the business growth is the business itself in terms of its structure and goals, the performance of its management, in particular their ability to make rational decisions about its operation (Bridge et al., 1998).

In addition to this, some studies have emphasised the effect of cultural, political, and economic conditions of a country or region on the growth and development of enterprises. (Bridge et al., 1998: 110) have pointed out that "... the triggers for enterprise are found along a continuum from inborn attributes of individuals to complex interrelationships amongst often changing cultural, political and economic conditions at national, regional and regional and local levels". Smallbone and Wyr (2000) also point out that sectoral variations on small firm growth are common because of differences in market trends and competitive activities. Location is another factor. Variation in size, scope and buoyancy of demand in local markets is likely to affect growth opportunities. On the supply side, variation in the cost and availability of labour, premises and services is also influential. Nevertheless, small businesses are often adaptable, employing different strategies to deal with these local variables so that their impact is minimised.

Empirical evidence also suggests that growth orientation does not automatically create actual business growth, but a distinguishing characteristic of high growth businesses is the owner's commitment to expansion. Gibb and Davies (1990) identified the *personality – dominated approach* in which the entrepreneur is regarded as key to business development. A business set up to exploit an identified market opportunity would therefore be expected to have stronger growth orientation than one set up as a result of 'push' factors such as a lack of alternative opportunities. The owner's attitude to risk is another factor, which affects

willingness to use external finance (Brindley, 2005). More recently, the concept of “entrepreneurial capital” has also emerged as one of the contributing factors to the growth of enterprises (Davidsson and Honig, 2003; Lam et al., 2007). Entrepreneurial capital is considered to be the combination of financial and non-financial resources also known respectively as financial and non-financial capital possessed by the entrepreneurs (Firkin, 2003, Lam et al., 2007). Non-financial capital can be identified as including physical, organisational, technological, human, social, cultural, and symbolic capital of business owners.

Growth and Women-owned Enterprises

Despite its significance, not much work had been done to study growth of women-owned enterprises until the launch of Diana project in 1999 (Greene et al., 2003). “Notably absent was an understanding of factors affecting growth” and a lack of cumulative knowledge to adequately conceptualise and build explanatory theories on the growth process of women-owned enterprises (Brush et al., 2006: 4). Most of the work conducted was on women’s motivations to start a business and the subsequent effect of those motivations on growth (Buttner and Moore, 1997; Lerner et al., 1995); effect of their location (urban or rural) on business performance (Merret and Gruidl, 2000); and the effect of the size and sector on business development (Cliff, 1998; Du Reitz and Henrekson, 2000).

Buttner and Moore (1997) and Lerner et al. (1995) highlighted women’s motivations to start their own businesses (self-fulfilment and personal goal attainment, etc.) as the prime reason for women’s low quantitative performance (such as jobs creation, sales turnover and profitability) as compared to men. On the contrary, Carter and Allen (1997) found that access to financial resources and other financial aspects of business had stronger effects on business rather than choice or intention. Chell and Baines (1998) and Boden and Nucci (2000) also argued that women’s lack of human, social and financial capital affects their businesses more as compared to their intentions to start businesses. Selection of strategies that focused on market expansion and new technologies; and willingness to incur greater opportunity costs for the superior performance of their firms were the key factors for the high growth of women-owned business as compared to low or no growth firms as determined by Gundry and Welsch (2001). They also pointed out adequate capitalisation, access to a wider range of financial resources, organised structure, quality control, and earlier planning as the differentiating factors for better performance and growth of the women-owned enterprises.

Under the Diana project, Brush et al. (2004; 2005; 2006) confirmed that “...women often lacked the economic power and the social and family support structure to grow their ventures”, and the lack of adequate childcare might have forced them to keep their businesses smaller and more manageable (Brush et al., 2004: 8). They also found that one of the most important reasons of slower growth of women-owned businesses was that women encounter social structures in work, family and social life that influence development of human and social capital, different from their male counterparts. This lack of appropriate social capital to make meaningful exchanges within business networks limits their opportunities to raise growth capital and other resources crucial for the development and growth of businesses (Brush et al., 2005).

Though, considerable work has been done in the recent years to study the factors contributing/affecting the growth of women-owned enterprises especially under the Diana project, notably absent is the role of social values and cultural traditions in different societies. Bridge et al. (1998) have pointed these to be important factors affecting the growth and performance of enterprises. Since the dawn of civilization, women have been deprived of equal rights as of men in almost every field. Even today the subordination of women in the society prevails in varying extents irrespective of country and culture (Indra and Bharti,

2005). While the degree, the reasons and its impacts may vary, gender discrimination still persists having roots in social systems worldwide (Alila and Paderson, 2001; Dhameja, 2002).

Women Entrepreneurs in Islamic Societies - Pakistan

Though, significant progress has been made by women in the last few decades. Social, economic, political, and technological changes have helped introduce a new social structure which facilitated women's gradual movement to the public arena from the confinement of their homes. The situation in most of the Islamic countries is not the same as in the Western and other developed/developing countries. No matter which class or region Islamic women belong to, their situation relative to men is one of systemic subordination determined by specific patriarchal forces. Two factors especially influence women's occupational roles: the cultural norm of *pardah* (veil) and the notion of *izzat* (honour) (Roomi and Parrott, 2008: 2). *Pardah* has significance as an instrument of sexual segregation and seclusion based on spatial boundaries, where women's activities are confined mainly inside the home while men work outside, or where women's extramural activities are concealed behind the portable boundary of the veil (Papanek, 1982). *Izzat* is the notion that women are repositories of a family's honour, and that their chastity and good reputation, being highly valued, must be guarded (Shaheed, 1990).

Religious prescriptions, cultural norms and actual practices related to a woman's status and role vary widely and are sometimes highly contradictory. "There is considerable diversity in the status of women across classes (the socio-economic status of a woman's family), geographical regions, ethnic origin and the rural/urban divide due to uneven socioeconomic development and the impact of tribal, and feudal, social formations on women's lives" (Roomi and Harrison 2008: 2). For example, additional subordination of women derives from restrictions on spatial mobility (Shabbir and Di Gregorio, 1996). Women are not often permitted to move around freely in some families; from early childhood, they are not allowed to go out of their houses or to mix with males independently. Throughout life, they are protected and discouraged from doing things on their own. However, for others, who are willing to let their women go out and get educated and become active in economic arena, inadequacy of transportation facilities, both private and public, acts as an actual limitation on their physical movement (Roomi and Harrison, 2008).

Despite all these socio-cultural problems, the condition of women is not homogeneous in all Muslim countries. For example, in Pakistan, many women are able to cross these barriers and actively participate in economic activities. Moral support from immediate family members, actual perception of Islamic values regarding women's participation in economic activities, their mobility and access to transport, and their interaction with opposite gender for business can help them growing their businesses (Roomi and Parrott, 2008; Roomi and Harrison, 2008).

Proposed Framework

Based on the above mentioned discussion and previous research (Jovanovic, 1982; Evans, 1987; Basu and Goswami, 1999; Altinay and Altinay, 2006), five sets of explanation were identified for business growth. These sets of explanations focus on entrepreneur's personal resources, firm's characteristics, human resource strategy, entrepreneur's social capital, and social values and cultural traditions. Following hypotheses were developed on the basis of above mentioned discussion:

H1: For women-owned businesses in an Islamic society, business growth depends on the entrepreneur's personal resources.

- H2: For women-owned businesses in an Islamic society, business growth depends on the firm's characteristics.
- H3: For women-owned businesses in an Islamic society, business growth depends on the human resource strategy.
- H4: For women-owned businesses in an Islamic society, business growth depends on the women entrepreneur's social capital.
- H5: For women-owned businesses in an Islamic society, business growth depends on favourable/women friendly social values and cultural traditions.

Research Design and Methodology

The theoretical models developed by Jovanovic (1982), Evans (1987), Basu and Goswami (1999), and Altinay and Altinay (2006) were used to develop the theoretical model as a basis for econometric estimation for this study. It considered purely economic (Jovanovic, 1987), socio economic (Altinay and Altinay, 2006) as well as socio-cultural variables (Basu and Goswami, 1999). The model contained entrepreneur's personal resources, firm's characteristics, social capital, human resource strategy, and socio-cultural values as different blocks of variables and can be presented as follows:

$$y_i = f(x_{i1}, \dots, x_{ij1}, x_{ij1} + 1, \dots, x_{ij}, \dots, \epsilon_i) \quad (1)$$

Where y_i refers to business growth for the i th firm, where x_{i1}, \dots, x_{ij1} refer to entrepreneur's personal resources variables ranging from 1 to $J - 1$ and $x_{ij1} + 1, \dots, x_{ij}$ refer to firm's characteristic variables ranging from $J - 1 + 1$ to J , for the i th firm and so on. ϵ_i is a firm – specific stochastic variable, independent across firms. Basu and Goswami (1999: 59) have partitioned variables into initial factors and expansion strategy variables, as described below:

$$y_i = f(x_{i1}, \dots, x_{ij1}, x_{ij1} + 1, \dots, x_{ij1}, x_{ij1} + 1, \dots, x_{ij2}, x_{ij2} + 1, \dots, x_{ij}, \epsilon_i) \quad (2)$$

The equation 2 is transformed into a double log linear specification for the purpose of statistical analysis as follows:

$$\log y_i = \alpha + \sum_{j=1}^j \beta_j \log x_{ij} + u_i \quad (3)$$

Where $u_i = \log \epsilon_i$ ($i = 1, \dots, N$)

$u_i \sim N(0, \sigma^2)$

and $y_i = (Y_t/Y_s)^{1/(t-s)} - 1$

Y_t refers to the i th firm's sales turnover in period t (which is the last financial year) and Y_s is the sales turnover in the first year after start-up, adjusted for inflation.

The variables included in these blocks are explained in Table 1, which specifies their nature and measurement in detail. It also describes whether these are log or dummy variables. All dummy variables with a prefix D were used to "incorporate qualitative explanatory variables into a linear model" (Altinay and Altinay, 2006: 211), whereas continuous variables represented numerical data.

The study was carried out in Islamic Republic of Pakistan. One thousand and four hundred names of women entrepreneurs were randomly sampled from lists at the Federation of Pakistan Chambers of Commerce and Industry, the Trade Development Authority, the First Women's Bank, and from local directories and yellow pages. Random sampling was employed to minimise biases in the collection of data—although it must be acknowledged that the sample was not representative of a fully broad social spectrum and was mainly comprised of small and medium enterprises, excluding micro enterprises.

The data was collected through a questionnaire which included a mixture of scaled, multiple choice, rank order items, and open-ended questions designed to analyse the factors

influencing growth of women owned enterprises in Pakistan. The questionnaire was sent to 1400 women entrepreneurs across the country. Moreover, the online version of the questionnaire was sent to 900 women entrepreneurs through email with some cross-posting. Initial data was collected through 767 completed questionnaires from all over the country. The key factors influencing the growth of these enterprises were grouped into five categories i.e. entrepreneur's personal resources, entrepreneur's socio-cultural situation, nature of business / firm's characteristics, human resource strategy, and entrepreneur's social capital (Roomi and Harrison, 2008; Altinay and Altinay, 2006; Basu and Goswamy, 1999). Multiple regression analysis was performed using SPSS to test the hypotheses that these groups of factors influence the business growth independently and significantly.

A variety of financial measures have been utilised in the literature to evaluate business growth such as sales revenue (Rosa et al., 1996), the number of employees (Birley, 1987; Birley and Westhead, 1990), profit level (Edleman et al., 2005), and the number of customers (Baldwin et al., 1994). However, for this study, only compound sales growth and compound employment were adopted. One of the main reasons for doing so was the fact that extracting information from entrepreneurs about annual sales turnover and number of employees is considered to be least problematic through structured questionnaire (Rosa et al. 1996; Edleman et al., 2005) as these two are mostly recorded because of the administrative and legal reasons (Rosa et al., 1996; Barkham et al., 1996; Freel and Robson, 2004). Majority of the respondents were reluctant to share information about their customers and profit figures. This confirms the findings of Birley and Westhead (1990) and Edleman et al. (2005).

Based on the method adopted by Altinay and Altinay (2006) and Basu and Goswamy (1999), business employment growth was measured by change in employment since start-up.

$$E_i = E_j (1 + r/100)^a$$

Where E_i is the employment today, which is in year 2007-08, E_j is the employment at start-up, 'a' denotes the number of years since start-up, and 'r' is the compound average growth rate of employment since start-up.

Compound annual revenue growth was measured by change in annual revenue since the end of the first year of business.

$$S_i = S_j (1 + r/100)^a$$

Where S_i is the annual revenue generated in the most recent year, S_j is the annual revenue generated at the end of the first year of business, 'a' denotes the number of years since start-up, and 'r' is the compound average revenue growth rate since start-up.

Please insert Table 1 about here

Depending on the multivariate nature of the relationship between dependent variable (business growth) and independent variables, multiple regression analysis was performed. The main reason for using multiple regression as compared to a simple bivariate analysis was due to the problem of not able to "show one variable's influence on business growth without controlling for the influence of other variables" (Altinay and Altinay, 2006: 212). The F-test was applied to investigate the significance of a block. The purpose of using this method was to test the effect of a all five sets of variables one by one on the growth of women-owned enterprises. After identifying the significance of specific blocks of variables, significance of specific variables was identified through second econometric method. Based on the previous studies (Basu and Goswamy, 1999; Altinay and Altinay, 2006) the Kitchen Sink Model was used and all the listed variables were included as follows to move to a simpler model, for the estimation of regression:

$$\log y_i = \alpha_0 + \beta_1 D_{xi1} + \beta_2 D_{xi2} + \beta_3 \log x_{i3} + \dots + \beta_{26} D_{xi26} + u_i \quad (4)$$

Where D represented a dummy variable and i had a range from 1 to N. In the first stage, all variables were included in the model. The consequent stages involved eliminating the insignificant ones (with P values of greater than 0.9, 0.7, 0.5, 0.3, and 0.1 respectively).

Due to the complexity of the notion of growth, the research question was unfolded in certain categories, as mentioned above. In addition to quantitative findings, an explicatory method was applied as well involving a process of analytic induction by face to face in depth interviews of 50 women entrepreneurs. As explained by Jankowicz, the purpose of the enquiry was to gain sufficient understanding of the situation in order to predict future outcomes (Jankowicz, 2005: 111). Therefore, the method used in this study involved collecting data from women entrepreneurs in Pakistan through structured questionnaire as well as face to face interviews. The qualitative data collected was inductively analysed and interpreted in response to open-ended questions.

Findings and Analysis

Compound Sales Growth

The analysis was conducted for two dependent variables, compound sale growth rate and compound employment growth rate. The ANOVA test for the block of variables showed that entrepreneurs personal resources, entrepreneur's social capital and favourable socio-cultural factors made a significant contribution to the compound sales growth rate of women-owned enterprises confirming H1, H4, and H5. General to specific approach to test the significance of independent variables was applied and the results are presented in Table 2. The White's test and the Lagrange multiplier tests were conducted for the sample's heteroskedasticity (Basu and Goswamy, 1999) and confirmed that the sample was homoskedastic. Whereas, variance inflation factors ratios (VIF) for all the excluded variables at each stage confirmed that the multicollinearity was not a problem for the variables in the model.

The final model/equation for compound sales growth rate based on only those variables having a significance up to 10 per cent was found as below:

$$\text{Compound Sales Growth} = 0.0411 + 0.141 \text{Business Family Tradition}^{**} + 0.297 \text{Previous Work Experience}^{***} + 0.222 \text{Informal Networking}^{**} + 0.199 \text{Moral Support of Immediate Family}^{**} + 0.175 \text{Meeting with Opposite Gender}^{*} + 0.311 \text{Independent Mobility}^{***}$$

(Where * = Significant at 5 per cent, ** = Significant at 1 per cent, *** = Significant at 0.1 per cent, and the variable without * is significant at 10 per cent)

F- value = 58.544*** means significant at 0.001 level, $R^2 = 0.733$, $R^2 = 0.716$, N=739

Please insert Table 2 about here

Table 2 shows kitchen sink model including all the variables. The results for significant variables are illustrated in Table 3. The model has quite a high F-value (46.65*** significant at 0.001 level) with R^2 value of 73.3 per cent. This illustrates that OLS estimation for this model describes 73.3 per cent of the variation in the dependent variable, compound sales growth. The adjusted R^2 is 71.6 per cent, demonstrating that this empirical model can illustrate about 71 per cent sales growth of women-owned entrepreneurs in Pakistan. The absolute values of all the coefficients (β) between 0 and 1 indicate that the functional relationship between the dependent variable and all independent variables, is estimate to be concave (irrespective of being positive or negative). This means that the marginal contribution of each explanatory factor to growth is subject to diminishing returns (Basu and Goswamy, 1999; Altinay and Altinay, 2006).

The equation for compound sales growth shows significant influence of work experience in the same sector and independent mobility (at .001 level), business family traditions, informal networking, moral support of family members (at .01 level), and (able/allowed to have) meeting with opposite gender (at .05 level). The detailed discussion with 50 respondents helped in gaining in-depth understanding of the factors contributing to the growth of their businesses. Women entrepreneurs having business family traditions (immediate family members running their own businesses) and moral support of their family members appeared to be confident and well aware of the problems and issues and expressed that their family members (husband, brother or father) helped them with guidance, advise, providing contacts, and helping in mobilising resources when needed. A couple of the participants of the research stated:

“In the eight years of my entrepreneurial career, whenever I was stuck in a situation or any problem arouse, I knew my father and brother were there, at least to give me an advise, if not for fire fighting”.

“My husband has been running a business for seventeen years. Prior to starting my own four years ago, I worked for him for seven years. The experience I gained, the contacts I made, and the tricks of the trade I learned during those seven years help me almost every day. It gives me confidence and courage to take calculated risks. And I know I can always get a free advise from my husband whenever I need it.”

Please insert Table 3 about here

While living in a society, (which is reluctant to let women actively participate in the mainstream economic activities, though slowly and steadily moving towards it), the importance of family’s moral support was quite evident from their interviews as well. As one of the respondents described as follows:

“The biggest barrier to growth for any women entrepreneur is her male family members if they are not supportive; and they can be her biggest strength if they are supportive of her business activities. I was lucky that my father always supported me. He was the one, who not only appreciated my business idea but also introduced me to a couple of investors for financial resources.”

The literature describes women entrepreneurs’ endowment in financial, human, and social capital as one of the factors restricting their growth (Chell and Baines, 1998; Boden and Nucci, 2000; Brush et al., 2006). However, it also suggests that building and using social capital in an appropriate manner can solve this problem (Brush et al., 2004; 2005). Both the quantitative as well qualitative findings of this study confirmed the same and it was well explained by one of the women entrepreneurs as follows:

“One year before starting my business, I started going to women entrepreneurs networks, attending seminars and training programmes, and consciously meeting other women in business. It took a lot of my time, effort and energy, but I tell you, it was worth it. I got my first investor, first supplier of raw material, and first customer through my contacts I made during that year. The process has not stopped even in the fifth year of my business. I still get my clients, my suppliers and even investors from my contact. I am going to open my fourth branch in two months time with the financial share of someone whom I met at a house warming party”.

The unequal status of women in Islamic societies is due to the connection of gender with various forms of exclusion, although not uniformly so (Roomi and Harrison, 2008). The same is evident in Pakistani society as well. In certain classes, women's interaction with men is only frowned upon and in others it is highly objectionable. Their mobility is also restricted especially for women belonging to middle and lower middle class. Women in the upper class have access to private transport means and there are very few families who put restrictions on their mobility. For the lower classes, it is a matter of economic survival and most of the women are part of the mainstream economic activities. The study showed that women's independent mobility was highly significant (at .01 level) and meeting with opposite gender was significant (at 0.1 level) factor contributing to the sales growth of their businesses. A couple of the interviewees appreciated the importance of these factors as follows:

“Any woman entrepreneur’s family has to trust her as far as meeting with opposite gender is concerned. Until she has restrictions on her mobility and access to other business owners (most of whom are men), it is near to impossible to develop and grow her business. The only other option left is to jump on the band-wagon and work in traditional women based businesses where margins are quite low and competition is cut throat”.

“You ask me about the secret of my success. There could be many but the most important of them all is, the trust my husband has in me. Never he has put any restriction on my mobility or my interaction with men.”

Compound Employment Growth

The ANOVA test for the block of variables for compound employment growth rate as dependent variable also showed that entrepreneurs personal resources, entrepreneur's social capital and favourable socio-cultural factors made a significant contribution confirming H1, H4, and H5. General to specific approach to test the significance of independent variables was applied and the results are presented in Table 4.

Please insert Table 4 about here

The final model/equation for compound employment growth rate based on only those variables having a significance in the range of 0 to 10 per cent was found as below:

*Compound Employment Growth = -.0527 + 0.331 Educational Qualification*** + Employee Incentives* + 0.288 Informal Networking** + + 0.219 Trust*** + 0.181 Moral Support of Immediate Family** + Meeting with Opposite Gender**

(Where * = Significant at 5 per cent, ** = Significant at 1 per cent, *** = Significant at 0.1 per cent, and the variable without * is significant at 10 per cent)

F- value = 52.144*** means significant at 0.001 level, $R^2 = 0.687$, $R^2 = 0.668$, N=739

Table 4 shows kitchen sink model including all the variables. The results for significant variables are illustrated in Table 5. The model has even higher high F-value than the model for compound sales growth (52.14*** significant at 0.001 level) with R^2 value of 68.7 per cent. This illustrates that OLS estimation for this model describes 68.7 per cent of the variation in the dependent variable, compound employment growth. The adjusted R^2 is 66.8 per cent, demonstrating that this empirical model can illustrate about 67 per cent employment

growth of women-owned entrepreneurs in Pakistan. As same as for the compound sales growth, the absolute values of all the coefficients (β) between 0 and 1 indicate that the functional relationship between the dependent variable and all independent variables, is estimate to be concave (irrespective of being positive or negative). This means that the marginal contribution of each explanatory factor to growth is subject to diminishing returns (Basu and Goswamy, 1999; Altinay and Altinay, 2006).

Please insert Table 5 about here

Three of the variables, informal networking, moral support of immediate family and meeting with opposite gender have significant influence on both the compound sales and employment growth rates. Other factors include educational qualifications, employees incentive and presence of trust, which is an important variable for building and maintaining social capital contributing to access, mobilise and generate human and financial resources needed to develop and grow a business in the long run (Boden and Nucci, 2000; Brush et al., 2004; 2005; 2006; Deakins et al., 2007). One of the respondents explained her experience as follows:

“I believe that one of the most important aspects to make one’s business successful is by building trust with other stakeholders, be it suppliers, employees, existing customers or potential clients. Once I was able to develop trust, other things were easy to follow”.

One of the reasons for educational qualifications being an important influencing factor for compound employment growth could be deducted from the following statement:

“I completed my degree in management from the University and learned that building powerful teams was one of the most effective ways to achieve success in business. From the very beginning of my business, I looked for the best talent in the industry and those creative and innovative people never let me down”.

A number of respondents talked about employee incentives and termed them as a win-win situation to retain valuable human capital. One of them considered it as the most valuable tool to restrict brain drain as follows:

“It takes at least 6 to 9 months to train an employee, especially for technical jobs. I always try to save those expenses, an above all my time and energy. I give all my employees lucrative incentives, sometimes even the shares of my business, to retain them and make them an effective and efficient stakeholder in my business, and I know it works”.

It is worth notable that in this study, blocks of variables on entrepreneur’s social capital and favourable socio-cultural factors were proved to be highly significant contributing factors in the growth of both sales and employment rates of women-owned businesses. Whereas, other factors considered to be significant in the previous studies such as entrepreneur’s characteristics including behaviour, personality, attitude (Storey, 1994), location (Smallbone and Wyer, 1990; Merret and Gruidl, 2000), business age (Burns, 2007), size (Grant, 1998; Cliff, 1998), sector (Du Reitz and Henrekson, 2000; Johnston et al., 2005) as well as age of the entrepreneur could not proved to be significant influencing factors in the growth of women-owned enterprises.

Conclusions and Implications

This study, based on two econometric approaches, first by classifying variables into pre-determined blocks and then using the general to specific approach (Basu and Goswamy, 1999; Altinay and Altinay, 2006), illustrates the factors contributing to the growth of women owned businesses in Islamic Republic of Pakistan. This ground breaking work fills the gap in the literature of women's entrepreneurship development in Islamic societies. It finds six important factors each for both the sales as well as employment growth of women owned businesses with an overlapping of three factors, namely, informal networking, moral support of immediate family and independence to have meetings with opposite gender. This confirms that socio-cultural variables plays an important role in the growth of women owned enterprises in Pakistan. Women entrepreneurs do not enjoy the same opportunities as men due to a number of deep-rooted discriminatory socio-cultural values and traditions. Only few of them receive encouragement from immediate male family members, resulting in limited spatial mobility and a dearth of social capital for others (Roomi and Parrott, 2008). Women whose husbands and families tend to be less discouraging and those who can afford to have private transportation means for spatial mobility, undoubtedly have an advantage over others.

The study also found educational qualifications, employee incentives, and trust as important contributing factors to compound employment growth. Whereas, business family traditions, work experience in the same sector, and independent mobility were other factors being important for the growth of enterprises. This fortifies the findings of previous studies (Storey, 1994; Henry et al., 2005) that education and work experience are important factors for the growth of enterprises. However, the unique contribution of this paper is the identification of socio-cultural variables affecting or contributing to the growth of women-owned enterprises in Islamic countries. The qualitative analysis authenticates the quantitative findings of the multivariate analysis as well, strengthening the case for building and using social capital as well as favourable socio-cultural conditions for women's entrepreneurial growth. In addition, the findings of human capital as a vital factor, as measured by educational qualification and work experience in the same sector reinvigorates the need for development of human capital as national level, especially for women.

The findings also suggest that most of the women entrepreneurs are concentrated in low growth oriented, services, handicrafts and textiles sectors. They operate in the local market, where most of their customers are women. This is in line with women's enterprises in other Islamic countries, where the initial investment is relatively small as life experiences, hobbies and interests develop into fledgling businesses (Al-Riyami et al., 2003; Roomi and Parrott, 2008). Either they tend to remain small or face enormous problems because of endowment in their entrepreneurial (financial, human and social) capital. Only some of them, who are ambitious, creative, innovative as well as lucky enough to have adequate human capital, support of their immediate family members, and are able to access, mobilise or generate resources, cross the barrier and grow their businesses.

There are quite a few implications of the findings of this pioneering work. Firstly, there should be the 'true interpretation' of the status of women in an Islamic society. There is a need to change the current thinking at school level to promote the inclusion of women in economic activities. This would help by changing the stereotypical images of women in society and encourage family support and help. Thereby encouraging young women to develop entrepreneurial ambitions. Secondly, there is a pressing need to change the current public transport system. Government should take the lead in revising the provision of these services, thereby enabling more women to access transport services allowing them to travel more freely in the course of running their enterprises. Thirdly, print and electronic media should play its role of portraying the appropriate images of a modern 'Muslim woman' (who

has the right to acquire knowledge through education, right to own property and the right to manage their own enterprises). This could be facilitated by publishing images of inspirational and positive role models of successful women entrepreneurs. This would not only provide a source of inspiration for women to make specific career choices, but will also create an environment for family members to provide encouragement as female entrepreneurs seek to establish enterprises.

References

- Al-Riyami, R., L. Warren, and G. McElwee (2003). "Women entrepreneurs in Oman: Some barriers to success," *Career Development International*, 8: 339-46.
- Alila, P. and P. Pedersen (2001). *Negotiating Social Space: East African Micro-Enterprises*. Africa World Press: Trenton, NJ and Asmara, Eritrea.
- Altinay, L., and E. Altinay (2006). "Determinants of Ethnic Minority Entrepreneurial Growth in the Catering Sector," *The Service Industries Journal*, 26(2), 203-221.
- Baldwin, J., W. Chandler, C. Le, and T. Papalladi (1994). *Strategies for Success*, 61-53E: Statistics Canada.
- Barkham, R., G. Gudgin, E. Hanvey, and M. Hart (1996). *The Determinants of Small Firm Growth*. London: Jessica Kingsley.
- Basu, A., & A. Goswami (1999). "Determinants of South Asian Entrepreneurial Growth in Britain: A Multivariate Analysis." *Small Business Economics*, 13, 57-70.
- Birley, S. (1989). "Female entrepreneurs: are they really any different?," *Journal of Small Business Management*, 27 (1), 32-37.
- Birley, S. and P. Westhead (1990). "Growth and Performance contrast between types of small firms," *Strategic Management Journal*, 11, 529-39.
- Boden, R. J. and A. R. Nucci (2000). "On the Survival Prospects of Men's and Women's New Business Ventures," *Journal of Business Venturing*, 15 347-362.
- Bridge, S., K. O'Neil, and S. Cromie (1998). *Understanding Enterprise. Entrepreneurship and Small Business*. London: Macmillan Business.
- Brindley, C. (2005). "Barriers to women achieving their entrepreneurial growth: women and risk," *International Journal of Entrepreneurial Behaviour & Research*, 11 (2), 144-61.
- Brown, S., W. Doyle, H. Lewis, D. Mallette, and P. Young (2002). *Women Entrepreneurs in Canada in the 90s*. Montreal: Business Development Bank of Canada.
- Brush, C., N. Carter, E. Gatewood, and M. Hart (2005). *The Diana International Report: Research on Growth Oriented Women Entrepreneurs and their Business*. Stockholm Sweden: ESBRI.
- Brush, C. and R. Hisrich (1999). *Women-owned Businesses: why do they matter?* Boston, MA.: Kluwer Academic Publishers.
- Brush, C., N. Carter, E. Gatewood, and M. Hart (2004). *Clearing the Hurdles: Women Building High-Growth Business*. New Jersey: Financial Times, Pearson Education.
- Brush, C., N. Carter, E. Gatewood, and M. Hart (2006). *Growth Oriented Women Entrepreneurs and their Business*. Massachusetts: Edward Elgar Publishing, Inc.
- Burns, P. (2007). *Entrepreneurship and Small Business*. Basingstoke: Palgrave.
- Buttner, E. H., & D. P. Moore (1997). "Women's organisational exodus to entrepreneurship: Self-reported motivations correlates with success," *Journal of Small Business Management*, 35 (1), 34-46.
- Carter, N. M., and K.R. Allen (1997). "Size determinants of women-owned business: Choice or barriers to resources," *Entrepreneurship and Regional Development*, 9 (3), 211-20.
- Carter, S., S. Anderson, S. and E. Shaw (2001). "Women's Business Ownership: A Review of the Academic, Popular and Internet Literature: Report to the Small Business Service," in *Small Business Service*. London.

- Chell, E., & and S. Baines (1988). "Does gender affect business performance? A study of micro business in business services in the UK," *Entrepreneurship and Regional Development*, 10 (2), 117-35.
- Cliff, J.E. (1998). "Does one size fit all? Exploring the relationship between attitudes towards growth, gender, and business size," *Journal of Business Venturing*, 13 (6), 523-42.
- Davidsson, P. and B. Honig (2003). "The Role of Social and Human Capital Among Nascent Entrepreneurs," *Journal of Business Venturing*, 18: 301-31.
- Deakins, D. (1996). *Entrepreneurship and Small Firms*. London: McGraw Hill Companies.
- Dhameja S. K. (2002). *Women Entrepreneurs: Opportunities, Performance and Problems*. New Delhi, India: Deep & Deep.
- Deakins, D., M. Ishaq, D. Smallbone, G. Whittam, and J. Wyper (2007). "Ethnic Minority Business in Scotland and the Role of Social Capital," *International Small Business Journal*, 25(3), 307-326.
- Edelman, L., C. Brush, and T. Manolova (2005). "Co-alignment in the resource-performance relationship: strategy as mediator," *Journal of Business Venturing*, 20, 359-383.
- Evans, D. S. (1987). "Tests of Alternative Theories of Firm Growth," *Journal of Political Economy*, 95(4), 657-674.
- Freel, M. S., and P. J. A. Robson (2004). "Small Firm Innovation, Growth and Performance: Evidence from Scotland and Northern Ireland," *International Small Business Journal*, 22 (6), 561-575.
- Firken, P. (2003). "Entrepreneurial Capital," in *Entrepreneurship: New Perspectives in a Global Age*. Eds. De Bruin, A. and A. Dupius. Aldershot: Ashgate, 57-75.
- Grant, R. M. (1998). *Contemporary Strategy Analysis*, 3rd Edition. London: Blackwell.
- Greene, P., M. Hart, E. Gatewood, and N. Carter (2003). *Women Entrepreneurs: Moving Front and Center: An Overview of Research and Theory*. United States Association for Small Business and Entrepreneurs.
- Gibb, A. and L. Davies (1990). "In pursuit of frameworks for the development of growth models of the small business," *International Small Business Journal*, 9 (1), 15-31.
- Gundry, L. K., and H. P. Welsch (2001). "The Ambitious Entrepreneur: High Growth Strategies of Women-owned Enterprises," *Journal of Business Venturing*, 16 (5): 453-70.
- Henry, C., F. Hill, and C. Leitch (2005). "Entrepreneurship education and training: can entrepreneurship be taught?" *Journal of Education and Training*, 47(2): 98-111.
- Indira P., & K. Bharti (2005). "A reflection of the Indian Women in Entrepreneurial World," *Working Paper*. Ahmedabad: Indian Institute of Management.
- Jovanovic, B. (1982). "Selection and Evolution of Industry," *Econometrica*, 50, 649 – 670.
- Lam, W., E. Shaw, and S. Carter (2007). "Entrepreneurial Capital: Convertibility, Personal Reputation and Firm Performance," *paper presented at the 30th Institute for Small Business and Entrepreneurship Conference*, Glasgow.
- Lerner, M., C.G. Brush, and R. D. Hisrich (1995). *Factors affecting performance of Israeli women entrepreneurs: An examination of alternative perspectives*. Boston MA: Babson College.
- Merrett, C. D. and J. J. Gruidl (2000). "Small business ownership Illinois: The effect of gender and location on entrepreneurial success," *Professional Geographer*, 52 (3), 425-36.
- Njeru, E., and J. Mjoka (2001). "Women Entrepreneurs in Nairobi: the socio-cultural factors influencing their investment patterns," in *Negotiating Social Space: East African Micro-Enterprises*. Eds. Alila, P. and P. Pedersen. Africa World Press: Trenton, NJ and Asmara, Eritrea.
- Orser, B., and A. L. Riding (2003). "Estimating the impact of a gender-based training program," *Working Paper*, Canada: Carleton University.

- Rosa, P., S. Carter, and D. Hamilton (1996). "Gender as a determinant of small business performance: Insights from a British study," *Small Business Economics*, 8, 463-78.
- Papanek, H. (1982). "Pardah in Pakistan: Seclusion and modern occupations for women," in *Separate Worlds*. Eds. H. Papanek and G. Minault. New Delhi: Chanakya Publications.
- Roomi, M. A. and P. Harrison (2008). "Impact of Women-only Entrepreneurship Training in Islamic Society," in *The Dialogue of Woman Entrepreneurship and Social Capital*. Eds. Aaltio, I., E. Sundin, and P. Kyrö. Denmark: Copenhagen Business School Press.
- Roomi, M. A. and G. Parrott (2008). "Barriers to Development and Progression of Women Entrepreneurs in Pakistan," *International Journal of Entrepreneurship*, 17(1), 59- 72.
- Shabbir, A. (1995). "How gender affects business start-up—evidence from Pakistan," *Small Enterprise Development*, 6: 25–33.
- Shabbir, A. & S. Gregorio (1996). "An examination of the relationship between women's personal goals and structural factors," *Journal of Business Venturing*, 11: 507–30.
- Shaheed, F. (1990). *Pakistan's Women: An Analytical Description*. Lahore: SANJH.
- Smallbone, D., R. Leigh, and D. North (1995). "The characteristics and strategies of high growth SMEs," *International Journal of Entrepreneurial Behaviour and Research*, 1(3), 44-62.
- Smallbone, D. and P. Wyer (2000). *Growth and Development of the Small Firm*. London: Pearson.
- Storey, D. J. (1994). *Understanding the Small Business Sector*. London: Routledge.
- Young, J. E. (1997). Entrepreneurship education and learning for university students and practicing entrepreneurs. In Sexton, D. L. and Simlor, R. W., *Entrepreneurship 2000*. Upstart Publishing: Chicago, IL.

Table 1
Independent Variables

Variables	Abbreviation	Name of Variable and Transformation
Entrepreneurs' Personal Resources		
Business entry decision	DENTMOT	Dummy variable if negative motives influence business entry decision = 1 otherwise = 0
Business family tradition	DFATH	Dummy variable Businessman/trader = 1 otherwise = 0
Age at business entry	AGENT	Age at business entry
Educational qualifications	DGRAD	Dummy variable Degree holder =1 otherwise = 0
Competent in English (official language)	DLANG	Dummy variable fluent in English = 1 otherwise = 0
Work experience in the same sector	DEXP	Dummy variable Yes =1 otherwise = 0
The Firm's Characteristics		
Business location	DENTLOC	Dummy variable in the least deprivation Index = 1 otherwise = 0
Business age	AGE	Business age
Legal status at start	DLIMIT	Dummy variable Limited Company = 1 otherwise = 0
Entrepreneur's Human Resource Strategy		
Delegation of functions to non-family members	DOUT	Dummy variable delegation of more than 3 Function (of 6) = 1 otherwise = 0
Employee business training	DTRAIN	Dummy variable if invested in employee Business training = 1 otherwise = 0
Employee incentives	DINCENT	Dummy variable if invested in employee Incentives = 1; otherwise = 0
Formal Recruitment	DFORMR	Dummy variable most favourable recruitment method is formal = 1; otherwise = 0
Entrepreneur's Social Capital		
Help of close relative(s) in business	DCLSRETV	Dummy variable Yes = 1 otherwise = 0
Help of friend(s) in business at start-up	DFRNDS	Dummy variable Yes = 1 otherwise = 0
Membership of formal groups	DMFGP	Actual number
Importance of informal networking	DINFNTG	Dummy variable Yes = 1 otherwise = 0
Participation in community activities	DPCOMACT	Dummy variable Yes = 1 otherwise = 0
Getting along with ... (trust)	DGETTST	Dummy variable Yes = 1 otherwise = 0
Business advise from friends, family....	DBSADVS	Dummy variable Yes = 1 otherwise = 0
Socio-Cultural Values and Traditions		
Moral support of immediate family	DMORSUP	Dummy variable Yes = 1 otherwise = 0
Awareness of Islam's actual perspective	DARISLAM	Dummy variable Yes = 1 otherwise = 0
Meeting with opposite gender	DINTMEN	Dummy variable Yes = 1 otherwise = 0
Independent Mobility	DINDMOB	Dummy variable Yes = 1 otherwise = 0
Availability of personal transport	DPTRSPT	Dummy variable Yes = 1 otherwise = 0
Overnight stay for business	DONTSTY	Dummy variable Yes = 1 otherwise = 0

(Adapted form Basu and Goswamy, 1999; Altinay and Altinay, 2006)

Table 2
Kitchen Sink Model Equation I (Includes All Variables)

Coefficient Table				
No.	Variable	β	t	Sig.
	Constant	0.018769978	0.432	.783
1	Business entry decision	-0.058657421	-.444	.419
2	Business family tradition	0.187650437	2.014	.001
3	Age at business entry	0.015653987	.329	.421
4	Educational qualifications	0.047689365	.296	.337
5	Competent in English (official language)	-0.069834787	-.674	.575
6	Work experience in the same sector	0.197859898	6.682	.000
7	Business location	0.065676583	.487	.184
8	Business age	-0.056007650	-.191	.719
9	Legal status at start	0.043498974	1.256	.329
10	Delegation of functions to non-family members	0.234354554	.905	.227
11	Employee business training	-0.065367543	-2.776	.765
12	Employee incentives	0.098798767	1.648	.662
13	Formal Recruitment	0.235325675	1.696	.564
14	Help of close relative(s) in business	0.076767690	.441	.298
15	Help of friend(s) in business at start-up	-0.065776892	-.764	.624
16	Membership of formal groups	-0.005667987	-.561	.454
17	Informal networking	0.198987245	5.540	.000
18	Participation in community activities	0.165472735	2.265	.207
19	Getting along with ...(trust)	0.145987568	.911	.455
20	Business advise from friends, family....	-0.023839730	-.369	.581
21	Moral support of immediate family	0.118475923	2.998	.000
22	Awareness of Islam's actual perspective on WE	0.023683248	.539	.281
23	Meeting with opposite gender	0.186518765	1.125	.001
24	Independent Mobility	0.289874539	.877	.000
25	Availability of personal transport	0.098675547	.290	.090
26	Overnight stay for business	0.002344574	.117	.783

Dependent variable is compound sales growth since start-up

Table 3
Kitchen Sink Model Equation II (Excludes Variables with P>0.10 in Equation I)

Coefficient Table				
No.	Variable	β	t	Sig.
	Constant	0.041148	3.98	.008
2	Business family tradition	0.141675	4.98	.006
6	Work experience in the same sector	0.297387	5.65	.000
17	Informal networking	0.222476	5.69	.002
21	Moral support of immediate family	0.198768	8.65	.001
23	Meeting with opposite gender	0.175185	3.97	.023
24	Independent mobility	0.311445	7.12	.000

Dependent variable is compound sales growth since start-up

Table 4
Kitchen Sink Model Equation III (Includes All Variables)

Coefficient Table				
No.	Variable	β	t	Sig.
	Constant	0.078534456	0.645	.467
1	Business entry decision	-0.086765459	-.734	.272
2	Business family tradition	0.185654544	2.674	.058
3	Age at business entry	0.026765654	.426	.868
4	Educational qualifications	0.199767852	2.879	.000
5	Competent in English (official language)	0.024834676	.558	.042
6	Work experience in the same sector	0.117645468	2.217	.008
7	Business location	0.023874678	.243	.387
8	Business age	-0.002657890	-.277	.291
9	Legal status at start	0.047565975	.376	.562
10	Delegation of functions to non-family members	-0.039871234	-1.983	.065
11	Employee business training	0.003464571	.298	.512
12	Employee incentives	0.074645474	1.127	.013
13	Formal Recruitment	0.465758432	1.992	.029
14	Help of close relative(s) in business	-0.017354758	-1.002	.301
15	Help of friend(s) in business at start-up	-0.004576849	-.449	.817
16	Membership of formal groups	-0.005765686	-.265	.761
17	Informal networking	0.127657558	2.567	.002
18	Participation in community activities	0.427365464	1.388	.029
19	Getting along with ...(trust)	0.290199283	4.365	.000
20	Business advise from friends, family....	0.011897239	.112	.816
21	Moral support of immediate family	0.298091876	2.992	.000
22	Awareness of Islam's actual perspective on WE	0.026454786	.427	.311
23	Meeting with opposite gender	0.217564365	1.198	.003
24	Independent Mobility	0.225436782	.619	.004
25	Availability of personal transport	0.026534742	.318	.096
26	Overnight stay for business	0.032765432	.425	.662

Dependent variable is compound employment growth since start-up

Table 5
Kitchen Sink Model Equation IV (Excludes Variables With $P > 0.10$ in Equation III)

Coefficient Table				
No.	Variable	β	t	Sig.
	Constant	-0.052745	-2.34	.005
4	Educational qualifications	0.331476	7.87	.000
12	Employee incentives	0.074645474	1.127	.021
17	Informal networking	0.288243	6.14	.002
19	Getting along with ...(trust)	0.219231	3.98	.000
21	Moral support of immediate family	0.181487	2.16	.002
23	Meeting with opposite gender	0.196787	1.787	.034

Dependent variable is compound employment growth since start-up

Success Prediction of female Entrepreneurs by using Biodata: Innovative approaches to practices of consultation and finance .

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In Germany we still find three times more men than women owned business start-ups (Spengler&Kohn, 2007). Because of different reasons women are disadvantaged when credit grantors only use unstructured interviews to predict entrepreneurial success. We are developing a biographic questionnaire, to raise validity of success prognosis, based on internet and literature research as well as interviews with experts (n=17) and entrepreneurs (n=45). The item pool contains 191 items for the key sample to select and weight the items for the final (cross)-validation. The use of such an instrument advances the proportion of male and female entrepreneurs, contributes standardization of the success prognosis process and helps investors to evaluate the entrepreneurs potential.

Track: 1. Women, Ethnic Minority & Immigrant Entrepreneurship

Risk Tolerance and Performance of Self-employment: Men vs. Women Entrepreneurs in Korea

by Joyup Ahn and Jaimie Sung

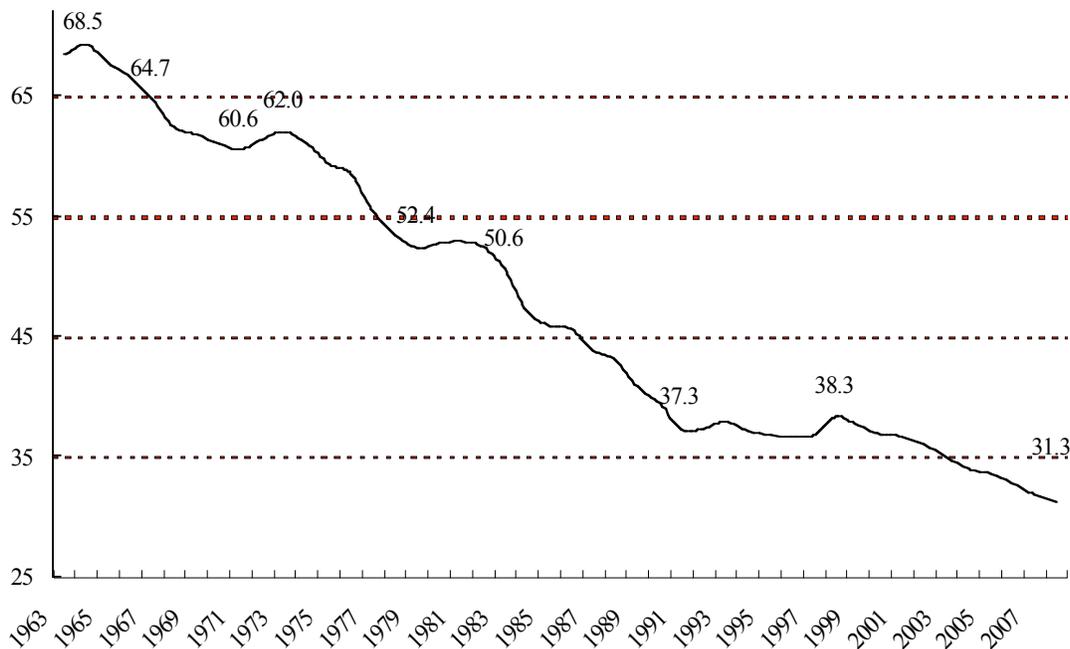
One of the most significant characteristics of the Korean labor market is that the proportion of self-employment is high: it was 38 percent in 2001 and has dropped to 31 percent in 2008. There has been no study considering the role of risk preference in choosing self-employment, its performance, and its termination. This study, which exploits information on the risk-taking behavior in the 7th wave of the Korean Labor and Income Panel Study (2004), constructs a measure for risk-taking indicator and uses it as an explanatory variable in the estimation of a multinomial logit model of choice of the employment status and a regression model of earnings function in order to check whether it has a significant positive effect on choosing self-employment and its economic performance. The estimates indicate that risk-takers are more likely to be their own boss but not own account workers, which implies that the indicator can be a proxy of entrepreneurship, and that the indicator does not have a significant positive effect on earnings for the self-employment, which implies no direct relationship between the indicator and entrepreneurship or between entrepreneurship and economic performance.

Introduction

One of the main characteristics of the Korean labor market is the high proportion of self-employment out of workers. As seen in the Figure 1, it is true that its proportion has shown a downward trend since 1963 (68 percent) when the developing process and the urbanization process started. It is also true that 31 percent in 2008 is still a higher level than in other countries such as USA (about 8 percent). It is noteworthy that, during 1990s, the proportion showed a slightly increasing trend from 37 percent to 38 percent and that again a decreasing trend during 2000s, which is mainly due to the economic recession and 'self-employment' restructuring since 2003. When farming households (agricultural sector) are excluded, the share of self-employment during 1990s has shown a significant increasing trend from 29 percent in 1990 to up to 32 percent in 1998. It was mainly due to an increasing trend of the share of male self-employment while no change in that of female self-employment, which resulted in no significant difference in the share of self-employment between male and female (around 31 percent in 2001).

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Figure 1. The Long-Term Trend of the Proportion of Self-Employment (unit: %)



Although self-employment has played a significant role in the Korean labor market as an alternative to paid employment in order to exploit entrepreneurship as well as a last resort for those who have lower employability and difficulties in finding paid employment, a few studies have been done by some researchers until now and most have focused on the choice of self-employment rather than a series of self-employment process such as start-up or opening a business, its growth, and its termination or closing a business. And further, there has been no study considering the role of risk-taking behavior in the whole process of self-employment, which is mainly due to lack of survey data providing appropriate information on risk preference.

The purposes of this study are threefold: the first is to construct a measure of risk preference, i.e., the risk-taking indicator (RTI), from the five experimental questionnaires in the 7th wave of the Korean Labor and Income Panel Survey; the second is to investigate the effect of the RTI on choosing self-employment, especially it with employees (being one's own boss) by employing multinomial logit model of the choice of the employment status, i.e., the employed, self-employment with employees (employers), and self-employment without employees (own account workers)ed, which implies that the indicator can be a measure of entrepreneurship; and the third is to investigate the additional effect of the risk-taking behavior on earnings of the self-employed, which implies that entrepreneurship pays in as risk-premium.

The remainder of this paper is organized as follows. Section 2 introduces the data and information on the risk-taking behavior with its descriptive statistics and presents estimates of the ordered logit model of taking risks (cash vs. lotto and indifference). Section 3 constructs a measure of risk-taking indicator from various risk-taking behavior (three out of five are used in this study) and its effect on choosing self-employment is investigated by employing the multinomial logit model with three state, i.e., the

employed, self-employed with employees, and self-employed without employees. Section 4 investigates the effect of risk-taking indicator on earnings of self-employment. The final section concludes with a brief summary of results and some further directions.

Previous Studies on Self-employment in Korea

The studies focused on the self-employment started by Ryoo and Choi (1999) with Economically Active Population Survey of the Korea National Statistical Office. Using the cross data of January 1985–October 1998, they showed descriptive statistics of the self employed by demographic characteristics (age, educational level, work hours, industry and occupation) and worker stability in the study of 1999. Work stability of self employment which is measured by the changes of work status within one month was stable and showed similar proportion with regular wage workers, but the proportion of entering into the self-employment was higher temporary workers than regular wage workers. In the study of 2000, Ryoo and Choi used same data but created data as panel to analyze stability of male self-employment. They found that the substantial proportion of the labor flow into the self-employment comes from the non-employment, but such flows were largely confined to the relatively small group of marginal workers. They showed the expected duration of self-employment has changed from downward trend to upward in 1990. They concluded that the stability of self-employment has been increased since self-employment sector provided more opportunity to the highly educated and skilled workers than wage-employment sector.

Kim (2001) used 1999 Economically Active Population Survey, and included female self-employers for comparing the gender differences. The empirical analysis found that self-employment rate was higher for males than females since entry was larger but exist from self-employment was smaller in males than females. And a large part of gender gap in the rate of self-employment was due to the differences of demographic characteristics such as head of family, marital status and age.

Kim (2000) investigated the factors related to the choice of self-employment, and found that previous work experience in self-employment, employment status of the father, age, marital status. Industry and occupation had significant effect on the choice. Keum and Cho (2000) analyzed the choice of self-employment and they divided self-employed into two groups of new entry group into the labor market and voluntarily transferred group from wage earners to reflect the diversity of self-employed. Cheon (2003) examined the determinants of being self-employed using both individual characteristics and economic environment by including financial constraint and regional unemployment rate. Regional unemployment rate was revealed as a significant factor to the choice of self-employment with human capital variables.

Ryoo (2004) investigated the reason of the increasing trend of male self-employment since 1990, after a long period of decline. Using 1998 to 2001 KLIPS, determinants of being self-employment and earnings of self-employment were estimated. Those who had higher educational level were more likely to be a self-employer with employee. Also, self-employers who had higher wages in previous workplace were higher probability to have higher level of earnings.

Choi, Jeong and Jung (2005) analyzed the distribution and determinants of income of the self-employed compared with that of wage-earners. They found that the income of self-employed was larger than that of wage earners and self-employed tended to have larger dispersion as well as larger heterogeneity. In another study of Choi and Jung (2007), they investigated gender differences in earning by comparing self-employer and wage earner groups. Gender differences in earnings were larger for the self-employed than for the wage earners due to the unobserved non-productivity factors including discrimination.

Kim and Kim (2001) used two data sets of Korean Household Panel Study and 1998 KLIPS and found that there was no difference in the job satisfaction between the self-employers and wage earners. Their findings were contrasted results with previous studies on other countries. The reason can be explained by the economic crisis of the Korea. On the other hand, Yee and Choi (2007) examined the factors related to the labor market outcomes of the self-employed in Korea and Japan. They found that job satisfactions of the self-employers were relatively higher than those of wage earners in both countries. Related to the positive income, tenure of the self-employed had positive effect on the self-employment in Korea while previous occupation had positive effect on the self-employment in Japan. Also human capital variables were the determinants of the magnitude of the income.

Sung(2002) examined the work time flexibility of self-employment focused on female workers. Presence of the young children which is known as most critical factor to the women's labor supply had negative effect on the choice of labor force participation but not on the choice of self-employment. However, female self-employers without employees and unpaid family workers were less likely to exit labor market compared with female wage earners. Therefore, self-employment could be a good alternative to evade women's career interruption and enhance the human resources.

Using 4th wave of KLIPS, Sung and Ahn (2002) investigated the economic performance and evaluation on the self-employment. Factors of educational level, previous work experience and mid-long term objectives of self-employers had significant effect on the earnings of self-employment. Mid-long term objectives as well as size of the business had significant effect on the amount of sales. Also, significant determinants of subjective evaluation on the economic performance of self-employment were economic performance, motivation of starting up the business and mid-long term objectives. The results implied the importance of consultants that support self-employers to set the mid-long term objectives of the business in the policy approach.

Ahn (2000) analyzed the duration of unemployment using competing risks model, and found that self-employers had lower expected duration of unemployment than wage earners in both male and female job seekers.

Ahn and Sung (2003) applied the proportional hazard model to analyze the determinants of the duration of self-employment using the 4th wave of KLIPS. They found that the level of education, economic performances, annual sales and earnings had positive effect, but hardship at the start of self-employment had a negative effect on continuing self-employment. Training before starting business showed a positive effect on continuing the self-employment, especially training provided by public sector not by private institutions.

Sung and Ahn (2004) examined whether individuals took the self-employment as bridge job between no work and wage work in the process of entering into or exiting labor market using 1st wave to 5th wave of KLIPS. Those who were older, females, less educated, and in the bad health status were more likely to choose self-employment as a bridge job in the process of exit the labor market, and that they were less likely to choose it as a bridge job in the process of entry into the labor market. Business cycle had a negative effect on its role of bridge job in the process of exit but not in the process of entry. They concluded that labor market policy should consider the self-employment as a better alternative than wage workers for the aged individuals.

Sung and Ahn (2007) included the risk tolerance variable to explain the choice of self-employment. KLIPS 7th wave has 5 experimental questionnaires to measure risk tolerance. In the analysis of self-employment choice, risk tolerance index created by combining 5 risk tolerance variables had statistically significant effect while individual risk tolerance variables had no significant effect. In the choice model of self-employers with employees and wage earners, both individual risk tolerance variable and risk tolerance index variable had statistically significant effect. Males and females who were taking more risks had higher probability of being self employed or self-employed with employees. Therefore, the level of risk tolerance is an importance factor in the decision of self-employment.

Jun and Choi (2006) examined the factors related to the proportion of self-employment in the macro level. They analyzed the effect of national income level, unemployment, and tax burden on the proportion of self-employment across the OECD countries. They found positive relationship of unemployment level, and negative relationship of tax burden with the proportion of self-employment. Individuals tended to choose the wage workers when the welfare system for the unemployed or the aged developed based on the tax revenue.

Risk-taking Measures in the KLIPS

Our data are drawn from the Korea Labor and Income Panel Study (KLIPS).¹ The 7th wave in 2004 includes information on risk-taking behavior,² by asking five questions as follows:

“You helped your friend for one day during the last weekend. He wanted to pay for your effort. He says you can choose either cash (100 dollars) or a lotto, of which probability and payment is given as follows. Which one do you prefer? Cash or lotto, or indifferent? ”

	Probability of being paid	amount
(Risk1)	50%	\$150
	50%	\$ 50
(Risk2)	50%	\$200
(Risk3)	20%	\$500
(RiskL)	40%	\$200
(RiskH)	60%	\$200

¹ See <http://www.kli.re.kr/> for more information on the KLIPS.

² The 10th wave of the KLIPS in 2007 also have the same information even though the proportions of taking risky assets are much lower, suggesting that the lower employment growth rate and restructuring of self-employment made respondents more pessimistic and take risk less.

Out of 11,661 respondents in the survey, 11,577 answer all of the five questions. As seen in the Table 1, 9.5 percent (11.4 percent when those who are indifferent are counted) take risky asset of the lotto. The proportion of those who take risk is higher for male (14.1 percent) than for female (5.1 percent), for singles (never married) than for the married with spouses present (married) or without spouses (ever married), and the medium educated than for the less educated or the more educated. It increases up to age group of 35~44 and then decreases thereafter. Figure 2 presents the proportion of risk-taking behavior by the age groups.

Table 1. Risk-taking by Demographic Characteristics (Risk2)

	Observation	Prefer		
		Cash	Indifferent	Lotto
All sample	11,577	88.6	1.9	9.5
Gender				
Male	5,586	83.4	2.5	14.1
Female	5,991	93.5	1.4	5.1
Marital Status				
Never Married	3,092	83.7	2.2	14.1
Married	7,259	89.7	1.7	8.6
Ever Married	1,226	95.2	1.9	2.9
Education Level				
Less than High School	4,207	93.7	1.6	4.7
High school graduate	4,018	86.2	1.7	12.1
Community college graduate	1,477	84.3	2.3	13.4
College graduate	1,665	85.3	2.7	12.0
Graduate	210	91.0	1.9	7.1
Age Group				
15~24	1,835	85.9	1.8	12.3
25~34	2,523	84.3	2.1	13.6
35~44	2,385	84.5	1.9	13.6
45~54	1,996	91.0	2.1	6.9
55~64	1,375	95.1	1.2	3.7
65 and over	1,463	97.0	2.1	1.0

Figure 2. The Proportion of Those who Take Risk by the Age group

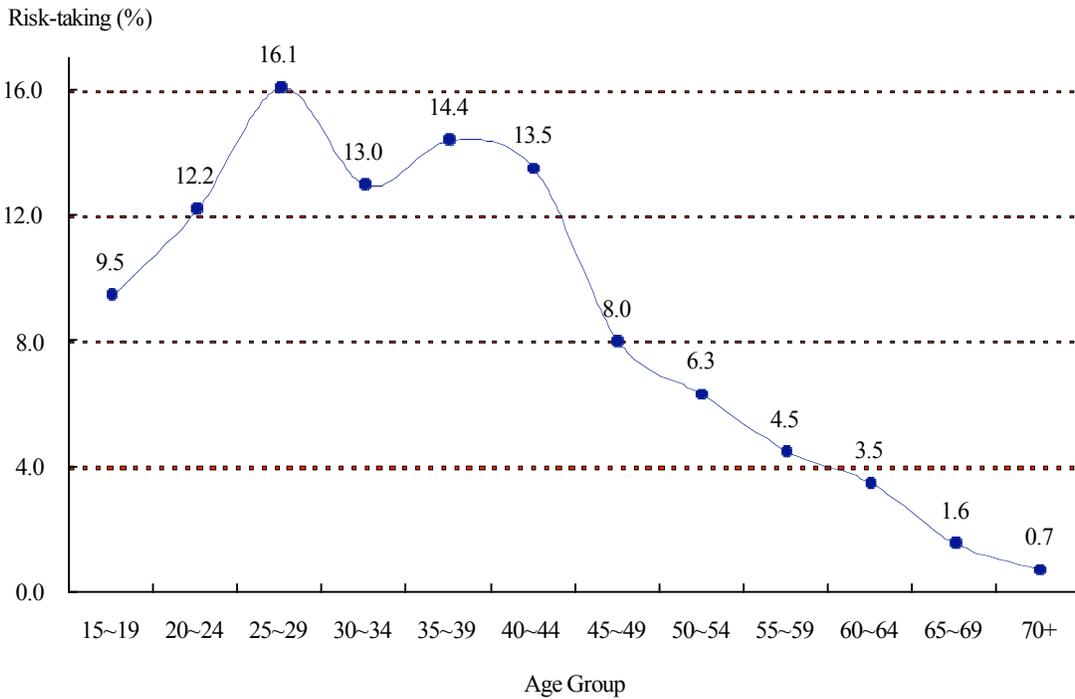


Table 2 presents estimate of the ordered logit model of risk-taking

- Y = 1 if choose lotto
- 0.5 if indifferent
- 0 if choose cash.

As seen in the table, females are less likely to choose risk asset than their counterparts. When the model is separately estimated by gender, age and education level have significant effects only on males' decisions to take risk while financial status of their households have them only on females'.

Table 2. Estimates of Ordered Logit Model of Risk-taking

	All			Male			Female		
Intercept Lotts	-4.7107	(.4794)	***	-6.2583	(.6657)	***	-3.8602	(.7920)	***
Intercept Indifferent	-4.4876	(.4791)	***	-6.0522	(.6653)	***	-3.5930	(.7915)	***
Female	-.7931	(.0913)	***						
Spouse	-.3077	(.1220)	**	-.2117	(.3271)		.0138	(.3075)	
Neither Head nor Spouse	.2643	(.1347)	**	.3109	(.1607)	*	.2269	(.2799)	
Age/10	.8772	(.1563)	***	1.3671	(.1979)	***	-.0398	(.2619)	
Square of Age/10	-.0012	(.0002)	***	-.0018	(.0002)	***	-.0001	(.0003)	
Highest grade completed	.1483	(.0492)	***	.2403	(.0755)	***	.1340	(.0715)	*
Square of grade	-.0055	(.0020)	***	-.0092	(.0030)	***	-.0046	(.0031)	
Never Married	-.0260	(.1412)		.0284	(.1655)		-.0122	(.3128)	
Ever married	-.0385	(.1606)		-.0761	(.2188)		.1077	(.3600)	
Health: Excellent	1.4973	(.1205)	***	1.2659	(.1505)	***	1.9576	(.1992)	***
Good	.4304	(.0795)	***	.4099	(.0979)	***	.4500	(.1393)	***

Bad	.1356	(.1374)		.2604	(.1695)		-.0992	(.2417)	
Worse	.3369	(.2904)		-.4194	(.4568)		1.2825	(.3891)	***
Have Financial Asset	.1711	(.0714)	**	.1356	(.0865)		.2638	(.1297)	**
Haver Real estates	.0387	(.0785)		.0555	(.0959)		.0384	(.1393)	
Have debts	.1614	(.0653)	***	.1184	(.0796)		.2536	(.1169)	**
No. of observations	11,580			5,589			5,991		
-2 log likelihood	8401.23			5349.74			2952.30		

Note: Risk 2 is considered.

***, **, and * stand for the significance level of 0.01, 0.05, and 0.10, respectively.

The Numbers in parentheses are standard errors.

Estimates for the existence of income by sources and regional dummies are not reported.

Are Risk-takers likely to be Their Own Bosses? Yes.

A. The Risk-Taking Indicator

In order to the effect of risk-taking behavior on the choice of work type, we first construct a measure so-called the Risk-Taking Indicator (RTI) from answers to the three questions, i.e., Risk1, Risk2, and Risk3. The RTI is defined as

$$RTI = \alpha_1 Risk1 + \alpha_2 Risk2 + \alpha_3 Risk3$$

where $Risk_i = 0$ if cash is preferred
 0.5 if they are indifferent
 1 if lotto is preferred

and α_i 's are weights related to corresponding risks, $i=1, 2,$ and $3,$ defined by

$$\alpha_i = (1/p_i) / \sum (1/p_j), \quad \sum \alpha_i = 1$$

where p_i is the proportion of the sample taking corresponding risk, i.e., the mean value of $Risk_i$ for all sample, which means that the choice of more risky asset has higher weight. The value of RTI ranges from zero to one by construction.

The Table 3 presents the descriptive statistics of the RTI by demographic groups. From the table, it can be found that male is much more likely to take risk than female and that singles have higher RTI than the married both for male and female. Also we can find that community college graduates have highest RTI among various education levels both for male and female. The Figure 3 showing RTI by age groups tells that, over the all age groups, male has higher RTI than female and that there are two peaks at age groups of 25~29 and 40~44 for male and one peak at age group 25~29 for female.

The Figure 4 presents the distribution of RTI by gender, which says that about 83 percent of the sample (90 percent of female sample and 77 percent of male sample) do not take any risks and that about 8 percent (=100-92 percent) of the sample (13 percent of the male sample and 4 percent of female sample) have the value of RTI greater than 0.5. The Figure 5 presents the RTI by the highest grade completed, which shows a quadratic relationships with a peak around 12~14.

Table 3. Risk-taking Indicator by Demographic Characteristics

	All	Male	Female
--	-----	------	--------

	Obs.	Mean	S.d.	Obs.	Mean	S.d.	Obs.	Mean	S.d.
All Sample	11,579	0.095	(0.245)	5,588	0.142	(0.296)	5,991	0.052	(0.174)
Marital Status									
Never Married	3,093	0.139	(0.287)	1,717	0.183	(0.326)	1,376	0.084	(0.216)
Married	7,260	0.086	(0.235)	3,607	0.126	(0.282)	3,653	0.047	(0.168)
Ever Married	1,226	0.037	(0.150)	264	0.088	(0.235)	962	0.023	(0.113)
Education Level									
Less than High School	4,208	0.053	(0.188)	1,660	0.089	(0.241)	2,548	0.030	(0.138)
High school graduate	4,019	0.115	(0.267)	2,054	0.162	(0.312)	1,965	0.067	(0.199)
Community college	1,477	0.128	(0.274)	725	0.178	(0.319)	752	0.079	(0.211)
College graduate	1,665	0.124	(0.274)	990	0.170	(0.322)	675	0.058	(0.164)
Graduate	210	0.079	(0.221)	159	0.087	(0.233)	51	0.052	(0.180)
Age									
15~24	1,836	0.122	(0.273)	889	0.163	(0.314)	947	0.083	(0.221)
25~34	2,523	0.131	(0.274)	1,242	0.187	(0.324)	1,281	0.077	(0.200)
35~44	2,385	0.126	(0.280)	1,213	0.193	(0.335)	1,172	0.057	(0.183)
45~54	1,996	0.079	(0.231)	987	0.123	(0.283)	1,009	0.036	(0.153)
55~64	1,375	0.043	(0.169)	679	0.066	(0.207)	696	0.020	(0.116)
65 and over	1,464	0.020	(0.104)	578	0.025	(0.117)	886	0.017	(0.093)

Figure 3. Risk-taking Indicator by Gender and Age Groups

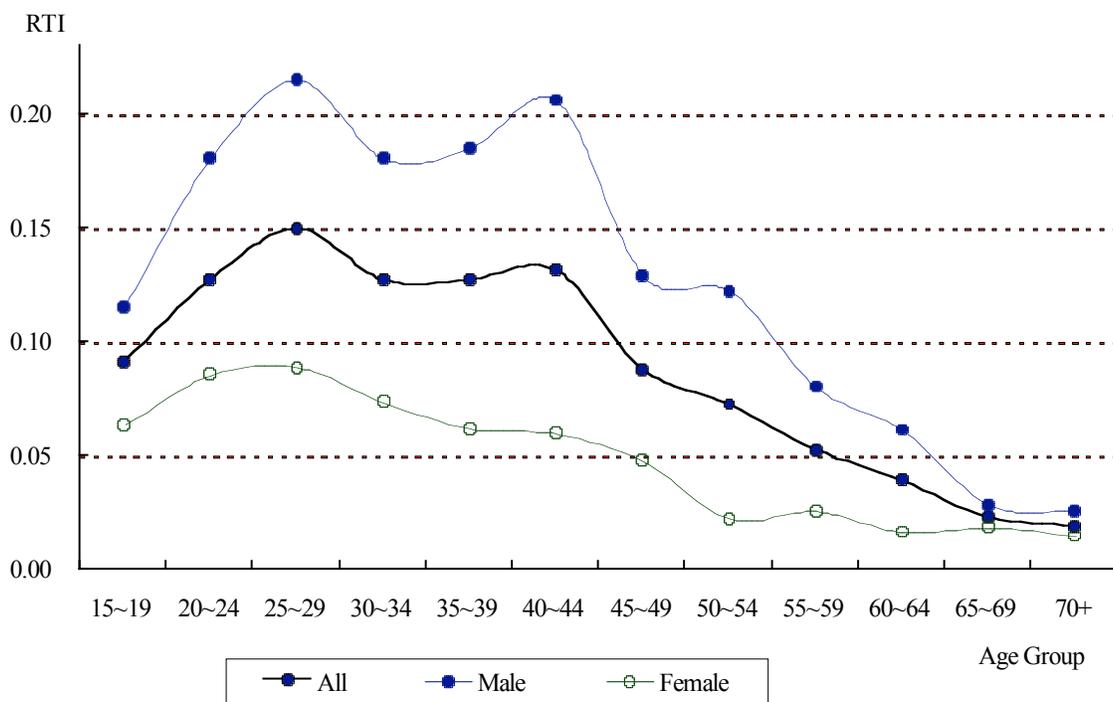


Figure 4. The Distribution of Risk-taking Indicator by Gender

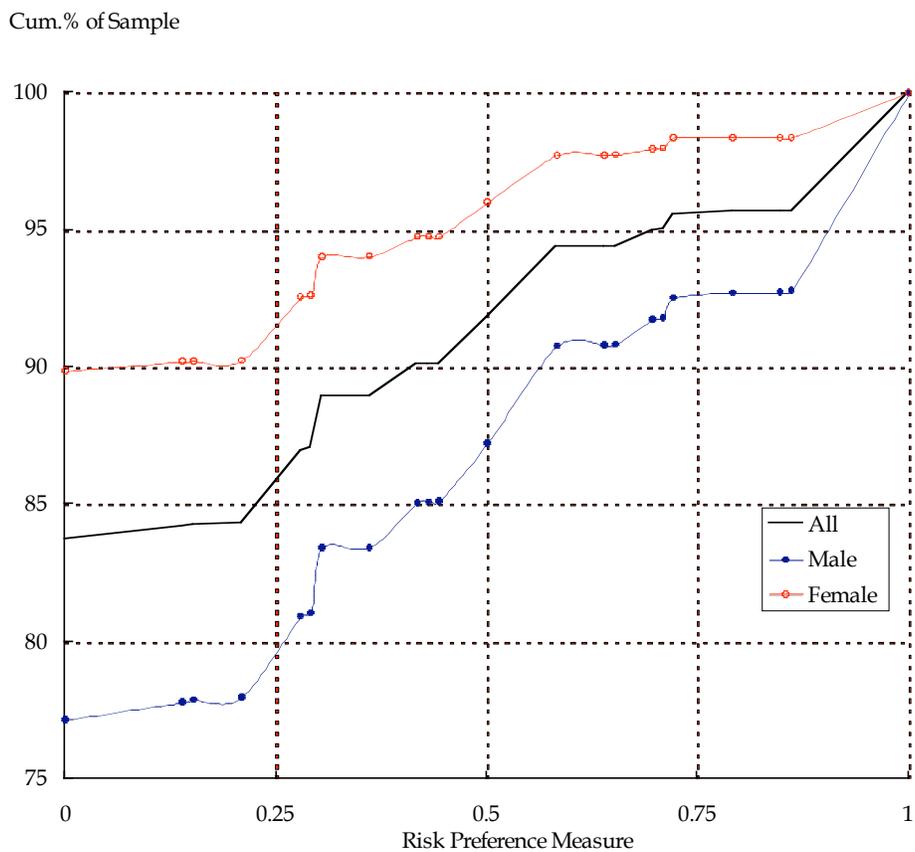
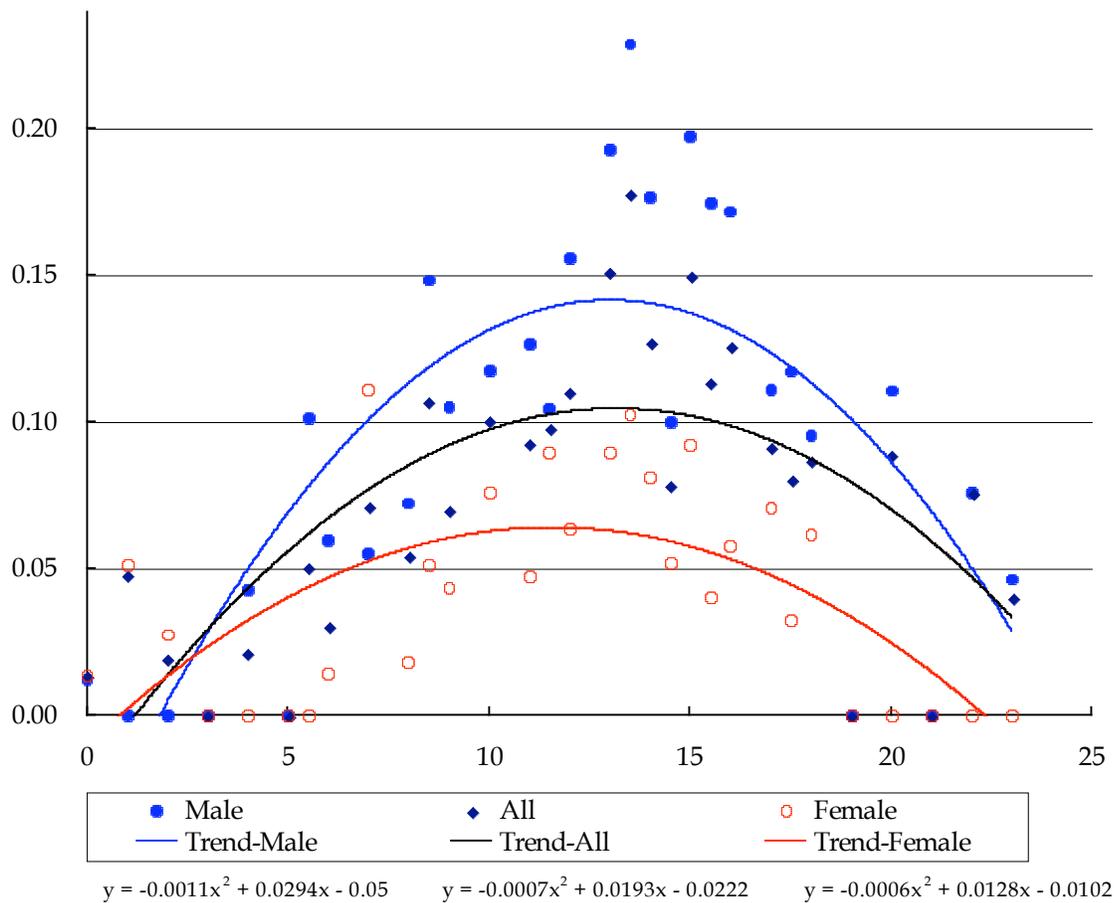


Figure 5. The Risk-taking Indicator and Highest Grade Completed



B. The Risk-Taking Indicator and the Employment Status

The Table 4 presents the mean and the standard deviation of the risk-taking indicator by the employment status and gender. First of all, it can be found that there is no difference in the RTI between the employed and the self-employed while the self-employed with employees (employers) have higher RTI than the self-employed without employee (own account workers) and the employed of any types. For male, the employed have higher mean of the RTI than the self-employed while its value is higher for the employer than for the employed and lower for the own account workers. For female, the employed and the self-employed have almost same mean of the RTI while the employer shows highest value of the RTI compared with other employment status.

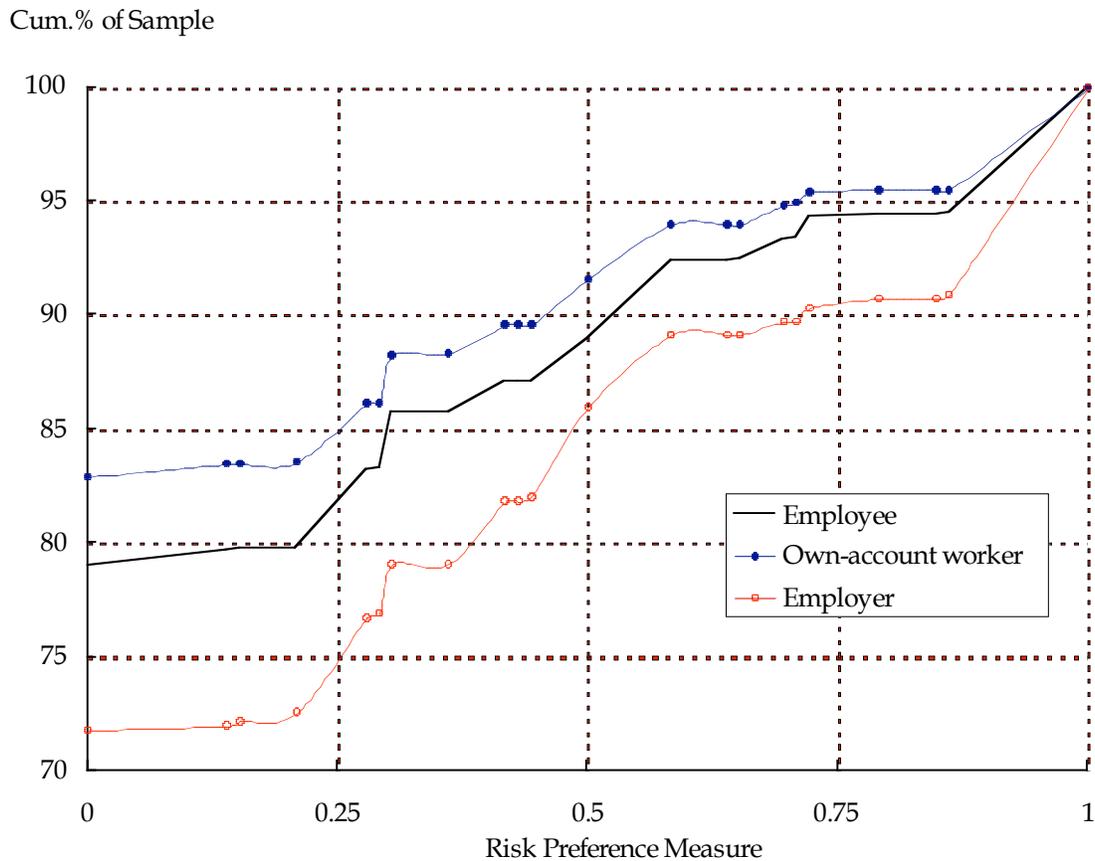
The Figure 6 shows the distribution of the RTI by the employment status, which says that about 79 percent of the employed do not take any risks while it is 72 percent for the employers and 83 percent for own account workers and that about 11 percent of the employed have the value of RTI greater than 0.5 while it is about 14 percent for the employers and 8 percent for own account workers.

Table 4. Descriptive Statistics of the RTI by the Employment Status

	All Sample			Male			Female		
	Obs.	Mean	S.D.	Obs.	Mean	S.D.	Obs.	Mean	S.D.
The Employed	4,230	0.124	(0.273)	2,548	0.162	(0.311)	1,682	0.065	(0.189)
Permanent Workers	3,288	0.132	(0.282)	2,060	0.170	(0.318)	1,228	0.068	(0.192)
Temporary Workers	445	0.094	(0.237)	163	0.148	(0.296)	282	0.063	(0.189)
Daily Workers	497	0.094	(0.236)	325	0.121	(0.264)	172	0.043	(0.159)
The Self-Employed	1,555	0.124	(0.276)	1,161	0.144	(0.297)	394	0.066	(0.191)
Employer	507	0.175	(0.319)	394	0.192	(0.335)	113	0.115	(0.246)
Own Account Workers	1,048	0.100	(0.249)	767	0.119	(0.272)	281	0.046	(0.161)
Unpaid Family Workers	467	0.053	(0.195)	46	0.214	(0.378)	421	0.035	(0.155)
Not Employed	5,327	0.068	(0.209)	1,833	0.110	(0.267)	3,494	0.046	(0.166)

Note: See the text for constructing the RTI.

Figure 6. The Distribution of Risk-taking Indicator by the Employment Status



C. The Effect of the Risk-Taking Indicator on the choice of the Employment Status

The Table 5 and 6 present estimates of the multinomial logit model of the choice of the employment status, i.e., the employed, the employer, and own account workers³:

- Y_i = 0 if employed (reference group)
 1 if self-employed without employees
 2 if self-employed with employees.

From the table, several facts are found. First, the risk-taking indicator has a statistically significant positive effect on choosing self-employment with employees than the employed (reference group) for both male and female while a positive but statistically insignificant effect on choosing self-employment without employees.

Second, age has a positive but a quadratic effect on choosing self-employment with and without

Table 5. Estimates of the Multinomial Logit Model of the Choice of the Work Status

	Employer			Own Account Worker		
Intercept	-9.3242	(1.0503)	***	-5.1752	(.7219)	***
RTI	0.6553	(.1625)	***	0.0584	(.1515)	
Age	0.2422	(.0412)	***	0.1509	(.0267)	***
Age Squared	-0.00211	(.0004)	***	-0.00108	(.0003)	***
Highest grade completed	0.0751	(.0169)	***	-0.0615	(.0126)	***
Never married male	-0.8037	(.3059)	***	-0.8481	(.2313)	***
Ever married male	-0.4427	(.3339)		-0.1048	(.2047)	
Never married female	-1.4426	(.4548)	***	-0.7888	(.2889)	***
Ever married female	-0.2198	(.2533)		-0.4877	(.1602)	***
Marry female	-0.0264	(.3350)		-0.6358	(.2703)	**
Spouse	-0.5852	(.3384)	*	-0.1941	(.2693)	
Neither head nor spouse	0.0364	(.2588)		0.18	(.1914)	
Health: Excellent	-0.0323	(.2723)		-0.4953	(.2531)	*
Good	0.0689	(.1134)		-0.2146	(.0871)	**
Bad	-0.128	(.2114)		0.1302	(.1303)	
Worse	-0.6929	(1.1230)		0.4172	(.4768)	
Home Ownership						
Rent with installment	-0.0526	(.2146)		0.4232	(.1729)	**
Monthly rent	-0.0642	(.3351)		0.8389	(.2517)	***
Others	0.1116	(.0930)		0.1553	(.0771)	**
Have Financial Assets	-0.037	(.1144)		-0.1438	(.0874)	*
Have Real estates	0.4329	(.1206)	***	0.5319	(.0929)	***
Have debts	0.4148	(.1073)	***	0.2477	(.0827)	***
The sample size	5,785					
-2 log Likelihood	7,432.89					

³ Most studies have explored the split between self-employment and paid employment while the division within self-employment between own account workers and employer status has been adopted recently (see Earle and Sakova (2000)). In Korea, the latter reflects the reality in Korea more appropriately in the sense that self-employment with employees is an alternative for entrepreneurship while self-employment without employees is more likely to be a last resort for survival.

Note: See Note in the Table 2.

employees for male and female. The peak age of choosing self-employment is at 55 for male employers, 59 for female employers, 66 and 92 for male and female own account workers.

Third, education has a significant positive effect on choosing self-employment with employees for both male and female while a significant negative effect on choosing self-employment without employees for male but not for female.

Fourth, the never married are less likely to be their own bosses compared with married for both male and female and to be own account workers for male but not for female.

Fifth, the health status plays a minor role in the choice of the employment status, i.e., better health has a negative effect on being own account workers for male.

Finally, the existence of debts and real estates asset have significant positive effects on being self-employed for both male and female while the existence of financial assets has a significant negative effect on choosing own account work for male but not female.

It can be concluded that, when other determinants are controlled, risk-taking behavior affects to be one's own boss rather than to be employed and therefore the RTI can be interpreted as an indicator of "entrepreneurship."

Table 6. Estimates of the Multinomial Logit Model of the Choice of the Work Status - by Gender

	Male		Female	
	Employer	Own Account Worker	Employer	Own Account Worker
Intercept	-9.2278 (1.2349) ***	-4.8876 (.8828) ***	-10.6732 (2.1422) ***	-6.6586 (1.3442) ***
RTI	0.5556 (.1762) ***	0.0472 (.1644)	1.428 (.4357) ***	0.2407 (.4251)
Age	0.2528 (.0486) ***	0.1619 (.0329) ***	0.2711 (.0847) ***	0.127 (.0484) ***
Age Squared	-0.00226 (.0005) ***	-0.00122 (.0003) ***	-0.00228 (.0009) **	-0.00069 (.0005)
Highest grade completed	0.0594 (.0194) ***	-0.0889 (.0152) ***	0.1062 (.0372) ***	0.0046 (.0246)
Never married	-0.9488 (.3365) ***	-1.1133 (.2577) ***	-1.2507 (.6223) **	0.1764 (.4812)
Ever married	-0.4829 (.3357)	-0.2191 (.2075)	-0.3069 (.5296)	0.3236 (.4106)
Marry female				
Spouse	-0.531 (.5365)	-0.4102 (.4501)	-0.7572 (.4901)	-0.2532 (.3971)
Neither head nor spouse	0.1731 (.3047)	0.5203 (.2313) **	-0.1778 (.5403)	-0.543 (.3525)
Health: Excellent	0.0253 (.2950)	-0.6245 (.2928) **	-0.4912 (.7865)	0.0342 (.5052)
Good	0.0817 (.1316)	-0.2683 (.1031) ***	0.0785 (.2311)	-0.0446 (.1684)
Bad	-0.1446 (.2586)	0.0454 (.1681)	-0.0848 (.3840)	0.3739 (.2208) *
Worse	-0.6549 (1.1399)	0.1636 (.5731)	-10.7169 (.495)	1.0513 (.8650)
Home Ownership				
Rent with installment	-0.1932 (.2432)	0.2386 (.1978)	0.3214 (.4722)	0.9272 (.3926) **
Monthly rent	-0.1657 (.3873)	0.789 (.2899) ***	0.341 (.7078)	1.1356 (.5732) **
Others	0.0853 (.1045)	0.099 (.0873)	0.1906 (.2115)	0.3256 (.1828) *
Have Financial Assets	-0.0401 (.1321)	-0.2533 (.1044) **	-0.0549 (.2383)	0.1911 (.1667)
Have Real estates	0.5298 (.1379) ***	0.501 (.1127) ***	0.0795 (.2657)	0.5669 (.1727) ***
Have debts	0.3623 (.1229) ***	0.222 (.0988) **	0.5303 (.2302) **	0.3321 (.1572) **
The Sample Size	3,709		2,076	
-2 log Likelihood	5,237.12		2,080.53	

Note: See Note in the previous table.

Is Risk-taking Behavior Paid? Well...

A. Higher Monthly Earnings for Self-employment⁴

The Table 7 presents the average monthly earnings for various employment status and gender. From the table, it can be found that self-employment with employees and without employees are paid more than the employed for both male and female, which suggests that entrepreneurship pays both for male and for female.

Table 7. The Mean of Monthly Earnings by the Employment status

(unit: 10 thousands won)

	All Sample			Male			Female		
	Obs.	Mean	S.D	Obs.	Mean	S.D	Obs.	Mean	S.D
All Workers	5,348	178.4	(192.5)	3,392	211.1	(223.9)	1,956	121.7	(97.0)
The Employed	4,162	158.1	(99.9)	2,516	187.3	(105.0)	1,646	113.4	(71.2)
Permanent Workers	3,263	175.1	(102.7)	2,043	203.1	(106.9)	1,220	128.0	(74.3)
Temporary Workers	429	85.2	(50.1)	157	104.6	(60.4)	272	73.9	(38.9)
Daily Workers	470	106.5	(58.3)	316	125.7	(57.7)	154	67.0	(35.0)
Own Account Workers	752	196.8	(368.0)	537	228.0	(426.7)	215	119.1	(103.4)
Employer	434	341.6	(309.4)	339	361.1	(323.5)	95	272.3	(241.5)

Note: The sample of workers, excluding unpaid family workers, who do not work in agricultural sector and have positive monthly earnings.

B. Does Risk-taking Behavior Pay? Yes, to Female Workers

The Table 8 presents estimates of a regression model of worker's monthly earnings. First of all, when usual determinants of earning function are controlled, the risk-taking indicator has a significant positive effect on earnings for female workers but not for male workers. The most risk-takers have 13 percent higher earnings than the least risk-taker (take no risk at all).

From the table some more important facts can be found. First, tenure increases earnings by 2 percent per year, which is higher for female than male, while male's labor market experience does it by 3 percent per year and one more year's education increases earnings about 6 percent. Second, the health status has significant positive effect on earnings, especially for male. Finally, for both male and female, the never married and the ever married earn significantly less than the married, of which difference is greater for male (30 percent and 14 percent) than for female (13 percent and 7 percent).

C. Does Risk-taking Behavior Pay to Self-employment? No.

The Table 9 presents estimates of a regression model of worker's monthly earnings by the employment status. First of all, risk-taking behavior pays for the employed rather than for the self-employed, which is contrary to the expectations. It suggests that entrepreneurship does not pay in pecuniary form or that the risk-taking indicator might not be a measure of entrepreneurship.

Tenure at the current job, in other words, the years running own business, does not have a significant effect on own account worker's earnings while it has a significant positive effect on employer's

⁴ Hamilton(2000) discusses on measuring earnings of self-employment compared with those of the employed. In this study, 'monthly earnings' reported by respondents is used for analysis.

earnings, 2 percent per year, which is smaller than for the employed (2.4 percent). Experience, which represents labor market experience before current job, does not have any significant effect on earnings of the self-employed while it has a significant positive effect on earnings of the employed. The education has a significant positive effect on earnings of the self-employed but the size of the effect is lower(4.6 percent per year for own account workers and 2.9 percent per year for employers), compared with the employed (5.3 percent per year).

The Tables 10 and 11 present estimate of a regression model of worker's monthly earnings by the employment status for male and female. It can be found that risk-taking behavior pays significantly higher only to employed female.

Table 8. Estimates of Earnings Functions- by Gender

	All Sample		Male		Female	
Intercept	4.2465	(.0709)***	4.2715	(.0857)***	4.0257	(.1095)***
RTI	0.0449	(.0255)*	0.0213	(.0284)	0.1295	(.0598)**
Part-time work	-0.5000	(.0330)***	-0.5775	(.0565)***	-0.4549	(.0408)***
Nonstandard work	-0.2863	(.0201)***	-0.2673	(.0284)***	-0.2926	(.0287)***
Tenure	0.0209	(.0013)***	0.0198	(.0015)***	0.0251	(.0025)***
Experience (male)	0.0311	(.0049)***	0.0299	(.0050)***		
Square of Experience (male)	-0.0010	(.0002)***	-0.0010	(.0002)***		
Experience (female)	-0.0126	(.0056)**			-0.0094	(.0057)*
Square of Experience (female)	0.0005	(.0002)**			0.0004	(.0002)*
Highest grade completed	0.0576	(.0029)***	0.0589	(.0036)***	0.0571	(.0049)***
Health: Excellent	0.0408	(.0357)	0.0921	(.0431)**	-0.0764	(.0641)
Good	0.0196	(.0158)	0.0510	(.0201)**	-0.0327	(.0255)
Bad	-0.2025	(.0292)***	-0.2366	(.0386)***	-0.1551	(.0449)***
Worse	-0.4570	(.1161)***	-0.3333	(.1415)**	-0.7026	(.2027)***
Firm Size: no employee	-0.1129	(.0322)***	-0.0855	(.0386)**	-0.2024	(.0592)***
1~4	-0.0115	(.0330)	-0.0035	(.0406)	-0.0555	(.0583)
5~9	-0.0389	(.0347)	-0.0321	(.0426)	-0.0806	(.0610)
10~49	-0.0418	(.0319)	-0.0169	(.0388)	-0.1051	(.0566)*
50~99	0.0040	(.0387)	-0.0031	(.0467)	0.0056	(.0697)
300~499	0.0871	(.0523)*	0.0603	(.0640)	0.1194	(.0912)
500+	0.1290	(.0358)***	0.1419	(.0430)***	0.0696	(.0655)
Never Married Male	-0.2941	(.0256)***	-0.3047	(.0267)***		
Ever Married Male	-0.1453	(.0454)***	-0.1442	(.0457)***		
Never Married Female	-0.3202	(.0416)***			-0.1314	(.0368)***
Married Female	-0.1614	(.0475)***			-0.0669	(.0375)*
Ever Married Female	-0.1983	(.0598)***				
The Sample Size	5,348		3,392		1,956	
Adjusted R-square	0.4709		0.3762		0.4017	
F-Statistics	79.02***		37.51***		25.77***	

Note: The sample is workers who have positive earnings. Experience is defined as (Age)-(Highest grade completed)-6-(Tenure at current job). ***, **, and * stand for the significance level of 0.01, 0.05, and 0.10, respectively. The numbers in parentheses are standard errors. Estimates of dummy variables for industry and location of workplaces are not reported.

Table 9. Estimates of Earnings Functions- by the Employment Status

	The Employed		Own Account Worker		Employer	
Intercept	4.2935	(.0626)***	4.7312	(.3000)***	6.1618	(.7261)***
RTI	0.0546	(.0231)**	0.0428	(.1005)	-0.0723	(.1033)
Part-time work	-0.4763	(.0262)***				
Nonstandard work	-0.2454	(.0171)***				
Tenure	0.0239	(.0012)***	0.0012	(.0040)	0.0196	(.0059)***
Experience (male)	0.0277	(.0043)***	0.0152	(.0276)	0.0223	(.0256)
Square of Experience (male)	-0.0009	(.0001)***	-0.0008	(.0008)	-0.0007	(.0008)
Experience (female)	-0.0079	(.0047)*	-0.0097	(.0365)	0.0556	(.0479)
Square of Experience (female)	0.0001	(.0002)	0.0005	(.0011)	-0.0010	(.0015)
Highest grade completed	0.0528	(.0026)***	0.0456	(.0103)***	0.0289	(.0145)**
Health: Excellent	0.0142	(.0307)	0.0521	(.1807)	0.2973	(.1750)*
Good	-0.0094	(.0141)	0.0255	(.0597)	0.2411	(.0740)***
Bad	-0.1044	(.0277)***	-0.3936	(.0875)***	-0.2382	(.1403)*
Worse	-0.3551	(.1122)***	-0.8405	(.3169)***	0.1257	(.6550)
Firm Size: no employee	-0.0727	(.0305)**				
1~4	-0.2033	(.0281)***			-1.2839	(.6576)*
5~9	-0.1283	(.0281)***			-1.0338	(.6629)
10~49	-0.0836	(.0254)***			-0.8206	(.6661)
50~99	-0.0047	(.0306)			-0.9764	(.8079)
300~499	0.0925	(.0412)**				
500+	0.1212	(.0284)***				
Never Married Male	-0.2319	(.0219)***	-0.5001	(.1311)***	-0.0257	(.1723)
Ever Married Male	-0.0869	(.0428)**	-0.3131	(.1367)**	0.0161	(.2178)
Never Married Female	-0.2776	(.0346)***	-0.3141	(.3152)	-0.6765	(.4406)
Married Female	-0.1391	(.0391)***	-0.4367	(.3643)	-0.5421	(.4171)
Ever Married Female	-0.0805	(.0518)	-0.6907	(.3764)*	-0.9191	(.4524)**
The Sample Size	4,162		752		434	
Adjusted R-square	0.6025		0.2663		0.2334	
F-Statistics	106.10***		6.56***		3.54***	

Note: See Note in the Table 8.

Table 10. Estimates of Earnings Functions- by the Employment Status: Male Workers

	The Employed		Own Account Worker		Employer	
Intercept	4.2762	(.0753)***	5.0439	(.3256)***	6.1932	(.7548)***
RTI	0.0395	(.0255)	0.0769	(.1039)	-0.1470	(.1113)
Part-time work	-0.5461	(.0440)***				
Nonstandard work	-0.2195	(.0240)***				
Tenure	0.0225	(.0014)***	-0.0026	(.0046)	0.0175	(.0067)***
Experience	0.0272	(.0043)***	0.0174	(.0268)	0.0262	(.0263)
Square of Experience	-0.0009	(.0001)***	-0.0009	(.0008)	-0.0009	(.0008)
Highest grade completed	0.0572	(.0033)***	0.0354	(.0122)***	0.0230	(.0171)
Health: Excellent	0.0392	(.0370)	0.1511	(.2021)	0.3342	(.1881)*
Good	0.0059	(.0181)	0.1418	(.0675)**	0.2495	(.0857)***
Bad	-0.1471	(.0368)***	-0.4047	(.1066)***	-0.0870	(.1762)
Worse	-0.1551	(.1339)	-1.0191	(.4006)**	0.0093	(.6698)

Firm Size: no employee	-0.0852	(.0376)**		
1~4	-0.2354	(.0356)***		-1.2580 (.6683)*
5~9	-0.1462	(.0343)***		-1.0628 (.6740)
10~49	-0.0715	(.0304)**		-0.7945 (.6777)
50~99	-0.0173	(.0362)		-0.9018 (.8225)
300~499	0.0641	(.0494)		
500+	0.1295	(.0334)***		
Never Married	-0.2368	(.0225)***	-0.5460 (.1289)***	-0.0426 (.1786)
Ever Married	-0.0782	(.0422)*	-0.3061 (.1336)**	0.0286 (.2250)
The Sample Size	2,516		537	339
Adjusted R-square	0.5297		0.2256	0.1658
F-Statistics	52.49***		4.63***	2.49***

Note: See Note in the Table 8.

Table 11. Estimates of Earnings Functions- by the Employment Status: Female Workers

	The Employed		Own Account Worker	Employer
Intercept	4.1264	(.0968)***	4.0281 (.4640)***	3.8737 (1.1786)***
RTI	0.0870	(.0529)*	-0.2507 (.3471)	0.5558 (.4078)
Part-time work	-0.4303	(.0332)***		
Nonstandard work	-0.2539	(.0248)***		
Tenure	0.0294	(.0024)***	0.0055 (.0081)	0.0311 (.0164)*
Experience	-0.0052	(.0050)	-0.0239 (.0395)	0.1055 (.0611)*
Square of Experience	0.0001	(.0002)	0.0007 (.0013)	-0.0022 (.0019)
Highest grade completed	0.0478	(.0045)***	0.0606 (.0195)***	0.0566 (.0355)
Health: Excellent	-0.0448	(.0542)	-0.3252 (.4032)	1.3728 (.9597)
Good	-0.0303	(.0225)	-0.3402 (.1281)***	0.2548 (.1872)
Bad	-0.0553	(.0424)	-0.4472 (.1594)***	-0.4677 (.2615)*
Worse	-0.7503	(.2009)***	-0.6642 (.5382)	0.
Firm Size: no employee	-0.0791	(.0535)		0.
1~4	-0.1839	(.0482)***		-0.2128 (.6408)
5~9	-0.1068	(.0497)**		0.4893 (.7550)
10~49	-0.1136	(.0459)**		
50~99	0.0191	(.0565)		
300~499	0.1170	(.0739)		
500+	0.0729	(.0531)		
Never Married	-0.1095	(.0318)***	0.1459 (.2338)	-0.1245 (.4369)
Ever Married	0.0293	(.0356)	-0.2952 (.1300)**	-0.2184 (.2418)
The Sample Size	1,646		215	95
Adjusted R-square	0.5283		0.1563	0.2706
F-Statistics	35.76***		2.10***	1.94*

Note: See Note in the Table 8.

Conclusion

During urbanization process in 1960s, industrialization process in 1970s and 1980s, shift of industrial focus from manufacturing to service since 1990s, self-employment has played important roles in the Korean labor market as a chance of exploiting entrepreneurial skills as well as the last resort for those who have difficulties in finding waged and salaried work and, therefore, its still higher share out of workers is one of the main characteristics in the labor market. Despite its importance, there have been a few empirical studies on self-employment in Korea and, mainly due to lack of appropriate information, risk preference has never been considered in the previous studies. It has been recognized since Knight (1921) that self-employment is riskier than paid employment due to uncertainty and the risk of business failure.

The seventh wave of the KLIPS provide information on individual's risk preference and this study utilizes it investigate the relationships between risk preference and choice of employment status and between risk-taking behavior and economic performance of self-employment in terms of earnings in order to prove two hypotheses that risk-takers would be more likely to be their own boss and that entrepreneurship measured by the risk-taking indicator would play an important role in the economic performance of self-employment.

The results of this study can be summarized as follows. First, females are less likely to take risks as expected and their tendency to take risk does not depend on age, the education level, and marital status but on the health status and existence of financial assets and debts while males' depends only on age, the education level, the health status.

Second, after controlling determinants of the choice of the employment status such as age, education, marital status, health status, home ownership, family financial status, family income by sources, and residential regions, risk-takers are more likely to be their own boss, especially to significantly choose self-employment with employees rather than to be employed, but not to significantly choose self-employment without employees, which implies that the risk-taking indicator constructed from three experimental questionnaires would be appropriate to measure entrepreneurship.

Third, even though, compared with the employed, earnings of the self-employed with employees are much higher and those of own account workers are slightly higher and the risk-taking indicator has an additional and significant effect on earnings when all samples are considered, there is no evidence of a significant positive effect of risk-taking behavior on earnings of the self-employed, which implies that entrepreneurship does not pay or the risk-taking indicator would not be a proper measure of entrepreneurship.

Further study on economic/pecuniary as well as non-pecuniary performance of the self-employed is required to investigate its positive relationship with entrepreneurship with more appropriate identification of entrepreneurship.

References

- Earle, J. S. and Sakova, Z., 2000, 'Business start-ups or disguised unemployment?: evidence on the character of self-employment from transition economies', *Labour Economics*, 7, 575-601.
- Hamilton, Barton H., 2000, 'Does Entrepreneurship Pay? An Empirical Analysis of the Returns to Self-Employment', *Journal of Political Economy*, 108(3), 604-631.
- Knight, F. H., 1921, *Risk, Uncertainty and Profit*, New York: Houghton-Mufflin.

References in Korean

- Ahn, Joyup (2000), Economic Crisis and Non-employment Duration: To Be Employed or Self - employed, *Korean Journal of Labor Economics*, 23(S), 109-132.
- Cho, Joon Mo Cho & Kim, Gi Seung (2007), Transition to Self-employment in Dualistic Labor Market: the Case of Korea, *Korean Economic Review*, 14(1), 73-82
- Choi, Kang Shik, Jeong, Jin Ook & Jung, Jin Hwa (2005), Income Distribution and Determinants of Self-Employment: Quantile Regression Analysis, *Korean Journal of Labor Economics*, 28(1), 135-156.
- Choi, Kang Shik & Jung, Jin Hwa (2007), Gender Differentials in Earnings: A Comparison of the Self-Employment and Paid-Employment, *Economic Review*, 55(4), 217-241
- Jun, In Woo Jun & Choi, Sung Ho (2006), The Determinants of Proportions of Self-employment Sector in OECD Economies and Their Implications, *Small Business Research*, 28(3), 165-181.
- Kim, Woo Yung (2000), Comparative Advantages in the Occupational Choice, *Korean Journal of Labor Economics*, 23(S), 55-80.
- Kim, Woo Yung (2001), Gender Difference in Self-Employment Rates in Korea, *Korean Journal of Labor Economics*, 24(2), 1-34.
- Kim, Woo Yung (2002), Aggregate Economic Conditions and the Growth of Self-Employment, *Korean Economic Review*, 11(2), 217-247
- Kim, Woo Yung & Kim, Eung Kyu (2001), A Comparative Analysis of Job Satisfaction between the Self - employed and Paid - employed in Korea, *Small Enterprise Research*, 23(3), 29-54
- Keum, Jae Ho & Cho, Joon Mo (2000), Theory and Empirical Analysis on the Self - employment Selection, *Korean Journal of Labor Economics*, 23(S), 81-107.
- Ryoo, Jae Woo & Choi, Ho Young (1999), Self-Employed Workers in Korea, *Korean Journal of Labor Economics*, 22(1), 109-140.
- Ryoo, Jae Woo & Choi, Ho Young (2000), Labor Market Dynamics in the Self - employed Sector in Korea, *Korean Journal of Labor Economics*, 23(1), 137-165.
- Ryoo, Jae Woo (2004), Earnings Opportunity in Self-Employment Sector and Workers' Self-Selection, *KYONH JE HAK YON GU*, 52(2), 5-32
- Sung, Jaimie (2002), The Choice of Self - Employment and Career Interruption Among Females, *Korean Journal of Labor Economics*, 25(1), 161-182.
- Sung, Jaimie & Ahn Joyup (2002), Economic Performance and determinants of subjective evaluation on the self-employment, *Quarterly Journal of Labor Policy*, 2(3), 101-136.
- Sung, Jaimie & Ahn Joyup (2004), Self-employment as Bridge Employment, *Korean Journal of Labor Economics*, 27(2), 1-27.
- Sung, Jaimie & Ahn Joyup (2007), Measurement of Risk Tolerance and Its Role in Choosing Self-employment, *Journal of Korean Economic Analysis*, 13 (1), 125-193
- Yee, Seung Yeol & Choi, Kang Shik (2007), An Analysis on the Self-Employment in Korea

and Japan, *Quarterly Journal of Labor Policy*, 7(4), 59-85.
Yu, Jeon Byeong (2003), A Study of Selection of Self-employment in Korea, *Korean Journal of Labor Economics*, 26(3), 149-179.

Women Entrepreneurship and Social Capital as a Heuristic for Understanding Innovations

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ABSTRACT: Academic research, published in special issues and books has often loose relation between the approaches and concepts and needs to search for progress and development in this field. This paper examines how it is possible to advance the conceptual thinking by adopting heuristic method. As an example we use the book edition of “The dialogue between women’s entrepreneurship and social capital”. As a result the heuristic method reveals and distinguishes as interplay between social capital and women entrepreneurship how women entrepreneurs overcome gender related obstacles, create and exploit innovatively opportunities by creating social capital and thus break the boundaries of otherness.

1. INTRODUCTION

In this paper we examine how conceptual thinking progresses through heuristic method and enriches the conceptual understanding of the dialogue between women’s entrepreneurship and social capital. The positivistic era believed that we end up with pyramids of knowledge, but does the contribution mean some kind of accumulation of knowledge and conceptual deepening of the phenomenon that is studied as well? As we find it, especially qualitative approach needs a lot of conceptual pondering in order to relate to other knowledge concerning the subject (Kyrö and Kansikas 2005). Since the contribution of the study is the main purpose of academic work on the one hand we need to understand and investigate what is meant by a contribution, on the other hand find a way of increasing innovativeness in providing this contribution (Aaltio, 2006, 451-454). New fields like women entrepreneurship benefits from “going to the roots of existence”.

Academic research is published in special issues of journals, in conference proceedings with certain themes and as edited collections of articles in book form. The unifying element in these arenas is often loose and barely shows a relation between the approaches. Moreover, like calls for conference papers, they are meant to stimulate thought and insights around the themes presented. There is a search for progress and development in the field. It is not rare that new concepts arise and soon supersede established ones. Sometimes they are cynically called fads and fashions or consultant driven knowledge production in managerial sciences and entrepreneurship especially. One reason for this may be the lack of innovative conceptual work when new knowledge is presented even if it is a result of a new empirical reality. In complex social settings there is also difficulties in communicating this innovativeness that after all is the core of contribution. The results might show the heuristic nature of the material, giving us insights, but using heuristic method in analyzing its impact is still rare. Conceptual work that combines and investigates the multiple results of the study is still rare in the jungle of academic pub-

lishing. We need tools that enable conceptual development in this field to enhance our conceptual analysis and understanding.

Gender research and feministic approach are more often classified to be change orientated and radical in that sense. As stated by Albert Mills (2002, 127-128) a key problem in reading any cultural history is the overwhelming modernist tendency to present history as a progressive unfolding of events. He adds that feminist researchers are not immune to the problem. There is no path of linear development when studied more closely for instance gender systems, they are not fixed but respond and contribute to change. Mills states that “the feminist researcher may be better served avoiding a search for cues that support a notion of progress over time, instead examining events to see what they tell us...”. Thus change is more important than progress. Processes and eradication of specific forms for instance in gender discrimination is of importance. One reason for that might be found from Abbott’s critics of the questions we pose. He claims that often our questions of gender might represent “comfortable one-sidedness” with women representing gender in a reductionist way. He further argues that this could be avoided by adopting heuristic method which opens more holistic and versatile views to the phenomena and aspects that might change the understanding about them (Abbott 2003, 85-86). How is the debate on entrepreneurship going further, what are its heuristics and which kind of new insights we get into social and economic life through its lens, is thus a crucial question for research and its contribution. Women entrepreneurship can be studied from multiple angles. One of them is discrimination. Do the practices of entrepreneurship make women invisible and probably hinder their participation on establishing and running up small businesses? Or, what is their special role, do they contribute to entrepreneurship in a special way? We find gender here as a metaphor to understand entrepreneurship better and bridge our understanding from body-counting, that means, seeing women only in a statistical and quantitative way, to asking what is their special connection to social capital accumulation. We further study if heuristic method can be used as a tool to new understanding.

2. SEARCH AND ARGUMENT HEURISTICS FOR NEW UNDERSTANDING

Social capital can be seen as a metaphor through which we try to understand some other societal phenomena. It has been even criticized not to easily render itself to quantitative analysis. We see that its metaphorical use can be however stimulating and shown otherwise. Overall, interpretative and analytic methods differ from each other in terms of how we understand the phenomenon that is studied. Lämsä and Takala (2001) argue that contextuality and a theoretical thematisation distinguish the interpretative method of concepts from the traditional, analytical approach to conceptualization. Interpretative concept research aims at describing and interpreting the meanings of concepts holistically. The interpretation is linked to the contextual factors and perceived as ever-changing, dynamic processes. Thus the concepts are ambiguous, changing, as well as socially and culturally constructed. Referring to Wittgenstein, Lämsä and Takala argue that if we wish to learn the meaning of concepts, we have to examine how they are used and then the use and situation of words – contextuality – determines the meaning. They divide the interpretative study of concepts into categories and one of them they name heuristic, which emphasizes constructing and specifying new concepts by producing them intuitively through reflective thinking. The process of reflective thinking is a dynamic way of examining the experiences, as well as thinking intuitively and rationally (Mezirow, 1995). This opens up further possibilities for creating new concepts (Leontjev, 1977). The dialogue between social capital and women's entrepreneurship provides an excellent arena for this process.

Problems of connecting social capital and gender approach

In studying social capital Lin (2001, 24-27) criticizes this approach to conceptualization by highlighting how the theoretical and measurement problems should be separated. According to him to identify social capital through its outcome is not valid, since the causal outcome cannot be defined by the effectual factor. However, for us this criticism offers an opportunity to apply the heuristic approach. The heuristic approach captures both the concepts and their conceptualization. Thus it serves as a means and end in the reflective conceptualizing process.

Another criticism comes from Helene Ahl (2008, 167-193). She thinks that there is a risk of seeing social capital as a collective phenomenon and assuming that women entrepreneurs have a social capital distinctly different from men. This actually essentializes what women are. If social capital is that which is enacted in interactions, how can one possibly talk about it as an entity at a collective

level? How does one meaningfully measure it? And how does one distinguish social capital from its manifestations (this is the same critique Liu presented in other words). Saying that women are different from men probably tends to reinforce their subordination. “Example would be arguments that women’s social capital is especially successful in labor intensive sectors such as care and services (as these are businesses with many women owners) and that their experience and expertise should be used fruitfully to further develop these sectors and make a valuable contribution to the economy”. Just as such an argument might encourage women it may also hold women back from entering other, more lucrative sectors. As gender studies underline, the reasons that women are concentrated in certain businesses is not to be found in their being as women, but in gendering processes that have cultural, historical, and political reasons. A version of the same problem is the assumption of women’s social capital as inherently good, the extension of an idea of “the good mother” on a collective level, argues Ahl. She suggests that we should use gender as an analytical concept instead of explanatory variable, use constructivism and study gendering processes.

Essence of heuristics

The history and traditions of heuristic approach relate a few decades backwards. The etymology of heuristics comes from the Ancient Greek “*heuriskein*” to find and “*heuretikos*” inventive. In its modern adaptations Frank (1997) traces heuristic traditions in two directions: first to the traditional idealistic approach to science in Central Europe followed, for example, by Michael Polanyi, and to the American origins of problem solving starting from Thorndike, but furthered especially by the Hungarian George Polya. These two traditions can also be identified in the current use of heuristic research and evaluation.

The later emerges especially in usability studies since the 1990’s in computer sciences. It emphasises the effectiveness of using heuristics in identifying the problems and shortcomings of on-line activities and interfaces or, based on cognitive psychology emphasises the problems of heuristics in decision-making (Chen and Macredie, 2005, Levit, 2006). Abbott (2003, 82-83) claims that the work of Polya is difficult to apply in the social sciences since both the problem and its solution are hard to anticipate as probabilistic thinking assumes. The former, idealistic approach is more concerned with the creative aspects of heuristics as a process of discovery and self-reflection. It is for example used in

educational studies as a reflective action oriented research method often referring to Polanyi's concept of a heuristic act (for example Vicky 1997). The heuristic act of achieving innovation is an act of invention and discovery (Polanyi's 1958). The aim of this paper is to find a way to do that.

Polanyi talks about personal revisions of guiding assumptions that change the rules of interpreting our experiences. He describes the adaptation of a framework to fit new experiences and the discovery of movement from one framework to another as heuristic vision. Clandinin (1986) interprets Polanyi's descriptions of heuristic acts as "acts achieving innovation". Abbot's book of *Methods of discovery – Heuristics for social sciences* combines and analyses all these aspects and introduces different kind of methods to proceed in this process. Thus borrowing this method from him is a natural choice for us.

In the field of entrepreneurship research, however, we were not able to find examples of usage of heuristics (for example Hine and Carson, 2007; Neergaard and Uthoi, 2007). This does not necessarily mean that it has not been used, but rather its use has not been explicated. Thus we have to take hints from different directions in order to find a way to implement it in our research. This kind of methodological borrowing process is typical to search heuristics. As Abbott describes it, it is often 'subterranean force driving analogy' (Abbott 2003, 114-120). In many fields of research this kind of borrowing is ordinary nowadays. For instance organizational studies started to borrow culture concept from anthropology in 1980's.

Abbott introduces different heuristics as a method of discovery. Overall, general heuristics are used as self-conscious devices for producing new ideas by manipulating arguments, descriptions and narratives in particular ways. Search and argument heuristics differ from each other: when search heuristics get new ideas from elsewhere the argument heuristics concern ways of turning old and familiar arguments into new and creative ones. (Abbott 2003, 120). However we think these two can be combined based on Abbott's ideas.

3. THE PROCESS AND RESULTS OF DISCOVERY

Heuristics applied

In this article we explicate this combination and use as data the book edition of “The dialogue between women’s entrepreneurship and social capital” we edited together. Its ideas originated in the workshop held in 2004 at Brussels, at the EIASM Institute on ‘Female managers, entrepreneurs and the social capital of the firm’. This workshop for the first time evinced the idea of making a dialogue between women entrepreneurship and social capital theory and research. In the Nordic Academy of Management Conference in Aarhus 2005 this dialogue continued and expanded with new participants from the group of researchers that convenes annually on the initiative of the government of France at the Dauphin University, in Paris. The shared understanding of these women’s entrepreneurship researchers from different countries and continents was that both the concept of entrepreneurship and social capital are multiple and complex, but interrelated. The book described the landscape of social capital and women’s entrepreneurship as we argue heuristically using social capital as a metaphor against which we reflect research conducted on female entrepreneurs

According to Polanyi and Porsch (1997), when one sees a problem and undertakes its pursuit, one sees a range of potentialities for meaning which one thinks are accessible. The interplay between social capital and women’s entrepreneurship contains these potentialities.

We believe that conceptualizing the heuristic dialogue between social capital and women’s entrepreneurship provides a helpful approach in expanding our understanding of women’s entrepreneurship. Lämsä and Takala (2001) argue that although the creation of new concepts can be seen as a creative dialectical process which combines intuition and rational thinking, there may also be political objectives behind the creation of concepts. This is understandable because these kinds of objectives give vision and direction to the process. Hardy and Phillips (1999: 20) maintain that the lack of suitable concepts decreases the chances of some groups to wield power. Women’s entrepreneurship is typically marginalized through its lack of concepts of its own.

As Yeager (1999 xxi) argues, “women’s influence in economy has been modest or almost invisible and their voices faint and cacophonous, despite the collectivity of sounds”. The interplay between social capital and women’s entrepreneurship might provide some collectivity for this voice and thus delineate this phenomenon. This encourages us to apply the heuristic approach in exploring this

interplay between women entrepreneurs and social capital. Among different heuristics, more specifically we integrate search and argument heuristics as two forms of general heuristics. For this purpose we strongly lean on Andrew Abbott's (2003) work in sociology. After employing search heuristics, that is finding analogy and borrowing method, we cultivate the analogy by adopting argument heuristics. We describe what we mean by heuristics as a method of discovery and how we use this integration in order to understand the explorations present in the book edition. We aim to find tools to progress conceptually the studies that share similar conceptual background.

The central point in search heuristics is analogy, for example analogy of the problem. Adopting ecology models to organizations is a good example of this; biological concepts are used in understanding organizations. In fact, a lot of cross-disciplinarity between branches of science can be explained through analogies. To cultivate analogy, assumes that we are willing to make rush connections, but also able to find means to do it. For us finding Abbott's ideas opened a new avenue to the methodological problems of discovery. Thus the methodology leads us to analogy. "Borrowing methods often involves analogy, but goes beyond it to invoke not only some ideas, but also whole apparatus of analysis. Analogy is usually well concealed and often only a starting point for an argument. It must be carefully elaborated and critically worked out on its own." Many of influential papers have their roots in a fairly simple analogy that is carefully worked out. (Abbott 2003, 114-120) This working out process can benefit from argument heuristics, which focus on ways of turning old and familiar arguments into new and creative ones. Once the analogy is found it can be elaborated by argument heuristics. "Argument heuristics works with the ideas one already has, trying to make them look unfamiliar and strange" (Abbott 2003, 120). Abbott differentiates four different categories of argument heuristics: 1) Problematizing the obvious 2) making a reversal 3) making an assumption and seeing what it gets you and finally 4) reconceptualizing.

We suggest here that the analogy can be elaborated by these forms of heuristics and we have chosen to use two of them; problematizing the obvious and then making a reversal. Next we will explicate what we mean by these and how they are used in revisiting the conceptualization of the dialogue between women entrepreneurship and social capital in the compilation of articles, all around the theme of women, entrepreneurship and social capital.

Starting with an analogy

We further study the possibilities of heuristic discovery to create new understanding on phenomena, like the one of women entrepreneurship and social capital. Moustakas (1990, 15) defines heuristic inquiry as "a process that begins with a question or problem which the researcher seeks to illuminate or answer. The question is one that has been a personal challenge and puzzlement in the search to understand one's self and the world in which one lives". Women's entrepreneurship is for us such a challenge that the interplay with social capital might elucidate. Our editing process can be seen as Polanyi's vision to fit new experiences and the discovery of movement from one framework to another based on heuristic vision and this is followed by a heuristic act. Abbott describes this kind of a problem as a base for the analogy.

Abbott highlights that analogy first and foremost should have the ability to break out of the standard frames put around the phenomenon. The analogy we take from him concerns education. He illuminates argument heuristics with an example of college education. What if its purpose is not to educate, but something else, for example store unemployed youngsters. This problematizing results the division of college education to educational and non-educational purposes.

Keeping in mind the critics about progress in gender studies and Abbotts' critics of one-sidedness in posing questions, perhaps we should reconsider the questions of research and focus on its purpose as Abbott exemplifies. This leads to problematizing the obvious: What if the social capital for women entrepreneurs represent something else than social capital as it is defined usually? Going further leads to making a reversal: What if women entrepreneurs are not only constructed by social capital but are constructing it for some purpose? These two argument heuristics lead to two different dialogues one drawn from social capital and one drawn from women entrepreneurship. Even both are the dialogue between social capital and women entrepreneurship, their meaning and conceptualizing might be quite different. Thus to cultivate the analogy assumes that these two argument heuristics can be explicated.

Originally when the book was edited social capital was used heuristically as a metaphor against which the landscape of the research on social capital and women's entrepreneurship was reflected.

Now taken conceptual approach we further progress this dialogue. Our analogy that leads to question this approach gives the leading role to women entrepreneurship and asks can it add something to the conceptualizing of the social capital or can it bring some specifics that cannot be drawn from the social capital discussion alone. The data consisting the ten chapters in the book were originally divided into three parts. These chapters are presented in the appendix. Here we restrict ourselves to what we find are the most important statements and questions as formulated in the texts. The first part discusses the specifics of women entrepreneurship and social capital discourse having in mind especially theoretical reflection and transformation. The second part deals with the gendered nature of social capital in entrepreneurship, the crucial element of business life. The third part focuses on the cross-cultural context of woman entrepreneurship. As a metaphoric approach this division of parts worked well. However in the conceptual analyses with argument heuristics it gets a bit different form. In problematizing the obvious, our first question “What if the social capital for women entrepreneurs represent something else than social capital as it is defined usually?” is approached through the theoretical chapters of the book (chapters 2, 3, 4 and 8). The other making a reversal “What if women entrepreneurs are not only constructed by social capital but are constructing it for some purpose?” is based on empirical chapters of the book (chapters 5, 6, 7,9,10 and 11).

Problematizing the obvious: social capital for women entrepreneurs’ represent something else than social capital as usually defined

Even if social capital is a concept creating images of stableness and boundaries, it is flexible leading to many alterations. Research on both social capital and women’s entrepreneurship has aroused interest within a relatively short time as a tool to explain social and economic phenomena (Aaltio, 2008, (a), 83-99). The growth of society’s wealth depends on its total capital, which consists of physical capital, natural resources, human capital and social capital. In the knowledge-society the share of physical capital constitutes only a minor part of a society’s total capital and a growing role is on the human and social capital in economic development and processes. As Fukuyama (1995) claims social capital creates prosperity in societies.

As stated by Kovalainen (2004, 156-157) the elasticity of the term ”social capital” has led to a situation where it is used very differently, depending on the context and research purpose in question.

Usually political science and sociology refer to a set of norms, networks, institutions and organizations through which access to some actions or power is gained. Coleman argues that it is embodied in relations among individuals (2000, 36), which in many ways are interlinked to trust. Keeping things together and saving society from disintegration are popular themes of social capital and trust. The accumulation of people's knowledge and trust emotional work is much needed in the formulation of social capital. Social capital developing through economic infrastructures can also be underlined (Bourdieu, 1986).

Women entrepreneurship is a field and not a marginalist approach in entrepreneurship studies (Moore, 1999). Women and men hold occupations, professions and managerial positions differently and likewise also differ as entrepreneurs. The segregation of female and male entrepreneurship resembles the division of the workforce in general. Their areas of entrepreneurship are along the lines of gendered work segregation. Women work more in areas where females are the majority, like in education and training fields and in work close to the home like caring for children and the elderly, restaurants and family business of services. The nature of the managerial jobs of women and men is different: human-resource management attracts more female managers to top organizational positions than other managerial areas. Findings from women's entrepreneurship also indicate that there are gender differences between men and women that pave the way to starting and running the business (Holmquist&Sundin 2002). By studying businesses as sites and women's entrepreneurship as a context in which gender attributes are assumed and reproduced, we can make visible their gendered nature, but also easily marginalise women entrepreneurs as gendered actors and shadow their individual roles as human capitalist. On the other hand gender lenses can make visible the position of women entrepreneurs and women managers in industries and fields of activities where the social capital is created and maintained by human capitalists. Moreover gender lenses can indicate that perhaps women entrepreneurs are key actors in these processes, which represent major asset of societies and economies as well as those new innovative fields and processes societies and economies have found essential for their renewal and competitiveness.

When female entrepreneurs initiate change they tend to base their innovations on social ideas. In technical fields as well as in general as small business owner-managers they constitute the minority world-wide (GEM 2007). It was not until the 1990s that women entrepreneurs began to embark on

business ventures in all types of markets and industry sectors and today we are witnessing a rapid increase of women-owned businesses on a global scale. In many countries their numbers are growing faster than men. Their position as minority and the fact that their firms are smaller than men has led to stereotypes according to which ‘women’ are less risk-taking, ‘women’ are carers, and ‘women’ are not innovative as entrepreneurs. Thus women are easily rendered as ‘the Other’ in the analysis of entrepreneurship, which emphasizes the universality of the concept. We can ask if social capital represent the mean to break and access to breaking the boundaries of “otherness” (Ahl 2004).

Gender needs cultural lenses and awareness of social processes. Gender is present when social relations actualize and indicate how women and men are ‘done’ in and by these processes. The concept of social capital and the cultural approach to organizations, being collective concepts with relational aspects, both promote understanding of organizations with shades of gender. Innovations and innovative organizational behavior are among the key factors in social capital, but it is not obvious why and how women entrepreneurs participate in these processes (Aaltio, 2008, 23-38, b). *To know what gender means is to understand its cultural dimensions in the context explored.*

As Gartner and Baker (2008) claim the definitions scholars use for characterizing the phenomenon of entrepreneurship matter in that these definitions tend to direct scholars towards a focus on certain questions about entrepreneurship while ignoring others. For example looking at Stevenson’s and Jarillo’s definition (1990, 23) “entrepreneurship as a process by which individuals – either on their own or inside organizations – pursue opportunities without regard to the resources they currently control” leaves us many questions of its interpretation in entrepreneurship research. The masculine interpretation often combines the opportunity to visible innovative industries dominated by men thus marginalizing women from opportunity recognition discussion and excluding the arenas women dominate from the core of entrepreneurship research. While today innovations are many ways based on social capital and collective, in many studies on women’s entrepreneurship their less important role in innovative industries and growth orientated business is emphasized. Perhaps social capital could be a mean and opportunity for women entrepreneurs to pursue opportunities and get access to those resources they don’t currently control but need for developing their businesses.

Summarising the opportunities social capital can represent to women entrepreneurs and small business owner-managers seem to open quite different avenue than its usual definitions.

- Social capital seems to be the field of innovations for women entrepreneurs – actually the content and mean of their businesses, which is highly valued and needed asset in society, economy and organisations.
- It seems to give access to pursue opportunities and to get access to resources needed for these activities
- Finally it seems to offer an opportunity to break the boundaries of “otherness”, which has paved the way of women entrepreneurship so far.

However all of these assume adopting gender lenses to explicate and to make visible on one hand the intangible asset of social capital and its processes, on the other hand women’s diverse contribution to its creation and maintenance. Thus finally explicating how it could enhance breaking the rules and norms leading to marginalising women entrepreneurs and not only break the otherness, but create the sameness. In this meaning social capital represents innovation and innovativeness to women entrepreneurs, neither boundaries and stability, nor structures, networks, norms or arenas for action as such. Also the focus in the interplay between women entrepreneurship and social capital goes beyond its understanding as a social construct and women and men as construct and constructing social structures and thus reproducing gender differences. Also the future analogies for advancing the research on the dialogue between women entrepreneurship and social capital should rather be addressed to the innovations, innovativeness and opportunity development and exploitation, than to the aspects of social cohesion, processes and stability.

Looking now the chapters of the book edition with the ideas of this problematizing part of argument heuristics broadens the previous view provided by heuristically using social capital as a metaphor against which these chapters were reflected.

Chapter 2 discusses the gendered nature of social capital in entrepreneurship. The reasons behind the attraction of social capital metaphor are discussed in a critical perspective as the inclusive element also has an exclusive potential for example Social capital is embedded in positive labels like

trust, often with a positive female stereotype. Even though social capital is not something that easily puts women in a strong position - rather social capital can be segregated by gender as both entrepreneurship and organizational positions are segregated by gender. It is essential that women become organizational entrepreneurs and break the marginality often given to them. Organizations create social capital and are created by social capital and this moulding process is always gendered.

All the elements of the previous argumentation are present in this chapter, but we now add heuristic to provide new understanding at the area.

Chapter 3 examines the scope of women's entrepreneurship research in recent decades and ends up by recommending that rather than continuing to debate the differences between male and female entrepreneurs, it would perhaps be more useful to examine the experiences, values, meanings and choices preferred by women entrepreneurs in order to find ways of supporting their progress without cutting them off from entrepreneurship in general.

This chapter actually provides the means to break the otherness in research and thus facilitates the process of getting access to pursue opportunities and to get access to resources needed for these activities.

Chapter 4 argues that the problems of equality with respect to women entrepreneurs are far more complex than assumed by the policy makers. It indicates how giving up the gender neutrality in policy-making might provide equality.

Thus this chapter describes the role and concrete political means how to break the otherness through gender lenses, by identifying the specifics of women entrepreneurship.

Chapter 8 argues that social factors are crucial in understanding women's entrepreneurship, but the social capital theory has limitations regarding its content, its courses and outcomes, and in addition to its unclarity there is a danger of restricting women's role to the private sector.

Thus this chapter summarises the central message of the results of the argument heuristics. All these more or less theoretical chapters tell us the same message that women entrepreneurship and social capital discussion is gendered, but not as such an explanation for the interplay between women entrepreneurship and social capital. Thus the starting point for understanding the interplay between women entrepreneurship and social capital is women's gendered position. That is globally shared and paves the way to women entrepreneurship. However it does not explain why and how women participate and create social capital. That might be quite different in different contexts. It also leaves us open the question what is the relationship between constructing and being construct when it comes to women entrepreneurship.

Making a reversal

What if women entrepreneurs are not only constructed by social capital but are constructing it for some purpose? Making a reversal is one of Abbott's four categories of argument heuristics. Some of the contributions in the anthology give clear examples along that line.

The use of gendered lenses in the study of entrepreneurship has added to our perspectives the social capital aspects of society. Entrepreneurs appear to have a special position in forming, developing and reorganizing the social capital in the business world and women can contribute to this process probably differently compared to men. But why and how they do so is not so obvious in the current stream of research in this field. Rather it is has been taken for granted that somehow there is a strong relationship between women entrepreneurship and social capital and that this relationship is different compared to their counterpart. We now look at these perceptions in the empirical chapters of the book in the light of the results of argument heuristics.

Chapter 5 investigates empirically female organizational entrepreneurs in Swedish public healthcare and elderly care. Innovative ways to save municipal funds as well as horizontal and local networks improved the results and demonstrated these women's abilities to take social risks. All these findings challenge traditional thinking on female abilities as entrepreneurs and also show how women-occupied areas like health-care and elderly care can be improved by using social capital and taking risks if we understand them in new ways.

The results of this example indicate how women entrepreneurs in the organization context choose intentionally the strategy of creating social capital for creating and exploiting opportunities.

Chapter 6 introduces us to the power of the network-credit system in different societies, in poor countries and in Nordic welfare state, Norway. By analysing the social networking through different forms of trust the chapter indicates how women entrepreneurs by joining the network overcome gender-related obstacles in financing regardless of culture.

This chapter gives full 'credit' to the Nobelist Yunus Mohammed's invention of the micro credit system. It also highlights how intentionally chosen strategy of join this network represent the mean for getting resources for exploiting opportunities.

Chapter 7 deals with organizational entrepreneurship, and the specifics of women's opportunities to gather social capital in organizational settings. In building one's reputation social capital has a role, and especially the strength of women's relationships with others and the extent of their connections to reach other contacts are crucial in women's ways to the top. This chapter shows how abilities to build social capital in organizational settings are essential and innovative way to exploit opportunities and enhance entrepreneurial behaviour in organisations.

Also this chapter highlights how creating social capital represents both an innovation that is the content of opportunity as well as access to entrepreneurial behavior that is to exploit opportunities in organizational settings.

Chapter 9 elaborates the concepts of identity, entrepreneur/entrepreneurship, profession and gender. Narratives of six women who have started private schools in Sweden describe how the women handle the complexity of the partly conflicting bases for identity construction in different ways. This article is a sociological window that shows the evolutionary character of the identity of the entrepreneur. Women take different positions at every stage of their life cycles. Initially a teacher in the public sector, the woman became the creator of a business, a pioneer of new pedagogical methods, a manager of relations with parents. From a professional situation where they had little decision-making power,

they have become resourceful, entrepreneurial and dynamic. Thus, they feel able to do what they want to do. Entrepreneurship helps women to achieve as teachers the way they decided to do their job.

This example exemplify how women innovate by creating social capital, which become an essential asset and an success factor for achieving and fulfilling their personal and professional needs and desires.

Chapter 10 explores the paradox between entrepreneurial competences and Islamic patriarchal, subordinating traditions that influence women's spatial mobility and occupational opportunities. It exemplifies how women-only training helped to overcome some of the problems faced with this paradox. Empirical findings from Pakistan indicate that the training program based on women's specific needs plays an important role in the improvement of their ventures' performance and also provides an opportunity to build self-esteem and confidence for creating and exploiting opportunities. The authors recommend that the right support, proper capacity-building, and conducive environment will help women to improve their entrepreneurial competences and thus exert influence on equality in Islamic societies.

Also this example indicates how women entrepreneurs and potential entrepreneurs intentionally overcome the obstacles of otherness and join the network for building social capital. For their cultural context it is also a social innovation for fulfilling women's needs and desires.

Chapter 11 introduces the results of the comparative study in Argentina, Brazil, Canada, the United States and Mexico. The findings from large surveys indicate that, by and large, women small business owners are more similar to one another than one would expect from the host of studies on cultural differences among managers. The relations between success and the two personal variables, self-efficacy and need for achievement, are particularly notable. The authors highlight the potential value of education and mentoring which would help budding women small business owners regardless of national context.

This chapter summarises the findings of entrepreneurship in general, which highlight meaning of self-efficacy and need for achievement in entrepreneurial processes. The results indicate that regardless of culture same issues are of importance to women as have been found as essential for men entre-

preneurs. The question it poses is, whether the social capital for women entrepreneurs represent also an innovative way to increase self-efficacy and increase their competencies for entrepreneurial behaviour which otherwise is not possible in the marginal position whatever culture it takes place.

Summarizing our reversal of what if women entrepreneurs are not only constructed by social capital but are constructing it for some purpose seems to be quite valid suggestion. Actually for women entrepreneurs either creating social capital or joining social capital networks seems to be an essential strategic decision for creating and exploiting opportunities, for increasing their human capital and fulfilling their needs and desires. The reason for creating social capital and joining existing networks seems to be due to their gender position and otherness, which creates obstacles other than their counterparts. Thus social capital breaks the boundaries of otherness despite the culture and context.

4. CONCLUSIONS

We argued that conceptual work that combines and investigates the multiple results of the studies is needed for explicating the contribution of special issues and book editions. As a tool to enable conceptual development in this field we introduced two forms of heuristic method, that of search and argument heuristics and explicated how they provided new angles to the understanding of the dialogue between social capital and women entrepreneurship. By reflecting in fact we made explicit what was implicit in the edition. The lack of suitable concepts typically marginalizes women's entrepreneurship and thus finding a way to enhance conceptualizing in this field is valid for advancing the research and practices of women entrepreneurship. Instead of "marginalizing" we promote "innovating" as an intrinsic line of women entrepreneurship and social capital concepts.

After employing search heuristics, that is finding analogy and borrowing heuristic method from sociology, we cultivated the analogy by adopting argument heuristics. Finding the analogy from the field of education lead us to argument heuristics first by problematizing the obvious with the question "What if the social capital for women entrepreneurs represent something else than social capital as it is defined usually?" then by making a reversal "What if women entrepreneurs are not only constructed by social capital but are constructing it for some purpose?" Social capital seems to be the field of innovations for women entrepreneurs – actually the content and mean of their businesses, which is highly valued and needed asset in society, economy and organisations. It seems to give access to pursue opportunities and to get access to resources needed for these activities. Thus it offers an opportunity to break the boundaries of "otherness", which has paved the way of women entrepreneur-

ship so far. Adopting these to the book chapters indicated that the starting point for understanding the interplay between women entrepreneurship and social capital is women's gendered position. The reason for creating social capital and joining existing networks seems to be due to their gender position and otherness, which creates obstacles other than their counterparts. Thus social capital breaks the boundaries of otherness despite the culture and context.

Thus heuristic method has indicated the essential role of innovativeness in conceptualizing the interplay between social capital and women entrepreneurship which through gender lenses can cross the borders of otherness and deepen our understanding more than using social capital as a metaphor against which we reflect research conducted on female entrepreneurs. As a method it invites to search for other methodological solutions to increase the rigor elaboration of academic publishing in special issues and compilations.

REFERENCES:

- Aaltio I. (2008a) Management education as an identity construction: the case of Estonia and its transition economy background. *International Journal of Entrepreneurship and Small Business*. 5/1, 83-99.
- Aaltio I. (2008b) Entrepreneurship in organization – gender and social capital. In Aaltio I., Kyrö P. and Sundin E., (eds.): *The dialogue between women's entrepreneurship and social capital*, 23-24.
- Aaltio I. (2006): Editorial. *Liiketaloudellinen Aikakauskirja (The Finnish journal of business economics)*, 2/06, 451-454
- Abbott A. (2003) *Heuristic for the Social Sciences. Methods of Discovery*. Norton, New York
- Ahl, H. (2004) *The scientific reproduction of gender inequality – A discourse analyses of research texts on women's entrepreneurship*. Malmö: Liber
- Ahl H. (2008) *The problematic relationship between social capital theory and gender research*. In Aaltio I., Sundin E. & Kyrö P. (eds.) *Women entrepreneurs constructing social capital in business life*. Copenhagen Business School & Tampere University, 167-193
- Bourdieu P. (1986) *The forms of capital*. In J.G. Richardson (ed.) *handbook of theory and research for the sociology of education*, 241-258. Westport Ct: Greenwood Press.
- Clandinin, D. J. (1986). *Classroom practice*. Philadelphia, PA: The Falmer Press.
- Chen S. Y. and Macredie R. D. 2005, *The assessment of usability of electronic shopping: A heuristic evaluation*. *International Journal of Information Management* 25 (2005) 516-532- Elsevier.

- Clandinin, D. J. (1986). *Classroom practice*. Philadelphia, PA: The Falmer Press.
- Coleman, S., "Access to capital and terms of credit: A comparison of men- and women-owned small businesses", *Journal of Small Business Management*, vol. 38, no. 3, 2000, p. 37-52.
- Frank T. (1997) George Polya and the Heuristic Tradition Fascination with Genius in central Europe. *Polanyiana* Volume 6 Number 2, 1997. The periodical of the Michale Polanyi liberal philosophical association. www.kfki.hu/chemonet/polanyi/
- Fukuyama F. (1999) *The Great Disruption: Human Nature and the Reconstitution of Social Order*. Profile Books, London.
- Fukuyama F. (1995) *The social virtues and the creation of prosperity*. Penguin, London.
- Gartner W. B and Baker T. (2008) "No Cash No Fear:" Just So Stories for an Entrepreneurial Age. 15th Nordic Conference on Small Business Research. Tallinne university of Technology August 2008.
- GEM, Global Entrepreneurship Monitoring Report 2007 (2007) Babson College, USA.
- Hardy C. and Phillips N. (1999): No joking matter: discursive struggle in the Canadian Refugee System. *Organization Studies* 20, 1: 1 – 24.
- Hine D. and Carson D. (Eds.) (2007) *Innovative methodologies in enterprise research*. Edward Elgar. Cheltenham UK.
- Holmquist, C. and Sundin, E. (Eds) (2002) *Företagerskan: Om kvinnor och entreprenörskap*. SNS Förlag: Stockholm.
- Kovalainen A. (2004) Rethinking the revival of social capital and trust in social theory: possibilities for feminist analysis. In: B. L. Marshall & A. Witz (rfd.) *Engendering the Social: Feminist encounters with sociological theory*. Open University Press, USA, 155-170.
- Kyrö, P. & Kansikas, J. (2005), Current State of Methodology in Entrepreneurship Research and some Expectations for the Future. In A. Fayolle, P. Kyrö & J. Uljin (eds.), *Entrepreneurship Research in Europe: Perspectives and Outcomes*. Cheltenham: Edward Elgar.
- Leontjev, A. N. (1977): *Toiminta, tietoisuus ja persoonallisuus*. Helsinki: Kansankulttuuri.
- Levit N. (2006) *Confronting Conventional Thinking: The Heuristics Problem in Feminist Legal Theory*. *Cardozo Law Review*, Vol. 28, 2006.
- Lin, N. (2001). *Social Capital: A Theory of Social Structure and Action*. Cambridge: Cambridge University Press.

- Lämsä and Takala (2001) Tulkitseva käsitetutkimus organisaatio- ja johtamistutkimuksen tutkimusmetodologisena vaihtoehtona. *Liiketaloudellinen aikakauskirja* 3/2001, 371-390. Association for business administration studies.
- Mezirow, J. (1995): Kriittinen reflektio uudistavan oppimisen käynnistäjänä. In Uudistava oppiminen. Jack Mezirow (ed.). Helsinki: Miktor.
- Mills A. (2002) History/herstory. An introduction to the problems of studying the gendering of organizational culture over time. In I. Aaltio & A. Mills (eds.) *Gender, Identity and the Culture of Organizations*. Routledge, 2002, London, 127-128
- Moore D. P. (1999) Women Entrepreneurs: Approaching a New Millennium. In: G.N. Powell (ed.) *Gender & Work*. Sage Publications, USA, 371-391.
- Moustakas, C. (1990). *Heuristic research: Design, methodology, and applications*. Newbury Park, CA: Sage Publications.
- Neergaard H. and Uthoi J. P. (2007). *Handbook of qualitative research methods in entrepreneurship*. Edward Elgar. Cheltenham. UK.
- Polanyi, M. (1958). *Personal knowledge*. Chicago, IL: University of Chicago Press.
- Polanyi, M. & Prosch, H. (1975). *Meaning*. Chicago, IL: University of Chicago Press.
- Stevenson, H. H. & Jarillo, J. C. (1990). A paradigm of entrepreneurship: Entrepreneurial management. *Strategic Management Journal*. 11 (Summer): 17-27.
- Yeager, M. A. 1999. (ed.) *Women in business*. Volume The international Library of Critical Writings in Business History. An Elgar Reference collection: Cheltenham, UK and Northampton, MA, USA.
- Vickie D. H. (1997) Volitional change in elementary teachers' conceptions of science pedagogy via a generative learning model of teaching. 1997 AETS Conference Papers and Summaries of Presentations. <http://www.ed.psu.edu/ci/Journals/97pap24.htm> Date of last revision/update : Nov 12, 1997.

Appendix I: The content of the book chapters

<i>Part I: Specifics of Women's Entrepreneurship Theory</i>

Chapter 1: Introduction. <i>Iiris Aaltio, Paula Kyrö and Elisabeth Sundin</i>

Argues for how social capital is used heuristically as a metaphor against which the landscape of the research on social capi-

tal and women's entrepreneurship was reflected.
Chapter 2: Entrepreneurship in organization, gender and social capital. <i>Iiris Aaltio</i>
Chapter 3: Gender in Entrepreneurship Research: A Critical Look at the Literature. <i>Camille Carrier, Pierre-André Julien and William Menvielle</i>
Chapter 4: From Marginality to Centre Women's Entrepreneurship Policy Challenges Government's Gender Neutrality in Finland. <i>Paula Kyrö and Kaisa Hyrsky</i>
<i>Part II : Gendered Nature of the Social Capital in Entrepreneurship</i>
Chapter 5: Organisational Entrepreneurs in the Public Sectors Social Capital and Gender. <i>Elisabeth Sundin and Malin Tillmar</i>
Chapter 6: Network Credit: The Magic of Trust. <i>May-Britt Ellingsen and Ann Therese Lotherington</i>
Chapter 7: Examining the Role of Social Capital in Female Professionals' Reputation Building and Opportunities Gathering: A Network Approach. <i>Yuliani Suseno</i>
Chapter 8: The Problematic Relationship between Social Capital Theory and Gender Research <i>Hellen Ahl</i>
<i>Part III :Cross-Cultural Context of Women's Entrepreneurship</i>
Chapter 9: Woman, Teacher, Entrepreneur: On Identity Construction in Female Entrepreneurs of Swedish Independent Schools. <i>Monica Lindgren and Johann Packendorff</i>
Chapter 10: Impact of Women-Only Entrepreneurship Training in Islamic Society. <i>Muhamad Azam Roomi and Pegram Harrison</i>
Chapter 11: Comparative Study of Women Small Business Owners in the Americas. <i>Terri R. Liturchy, Jo Ann Duffy, Silvia Monserrati, Suzy Fox, Ann Gregory, Miguel R.Olivas Lujan, BJ Punnet, Neusa Santos, Martha Reavley and John Miller</i>

WORKSHOP: WRITING CASES FOR TEACHING ENTREPRENEURSHIP

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This workshop is aimed at helping academics to develop their ability to write case studies that they can use as part of their teaching pedagogy. The workshop will highlight the key approaches to be taken when writing case studies and how they can be used to maximise the learning experience for students. The workshop is based on a very successful model that has already been organised as part of RENT (ECSB) Conferences in 2004, 2006 and 2008 and it is also currently being run in a number of European countries as part of an ECSB initiative. The workshop is supported by case materials that are available at www.ecsb.org.

Track: 4. Entrepreneurship and Economic Development

**A Comparative Approach to the Strategic Impact of R&D and Export Activity on
Firm Economic Performance in Small Business Firms: U.S., Japan and Korea**

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A Comparative Approach to the Strategic Impact of R&D and Export Activity on Firm Economic Performance in Small Business Firms: U.S., Japan and Korea

Abstract

This study empirically explores the nature of strategic impact of R&D and export Activity on the firm's diverse dimensions of performance (accounting-and market-based performance) in small- and medium- sized firms (SMEs) under diverse economic environments such as the U.S., Japan and Korea. But the univocal consideration of R&D and export activity for improving performance in SMEs across countries with different economic and business environments is relatively controversial because the validity and applicability of the conventional findings previously posited by large firms and/or by unitary measure of performances. Through the hierarchical regression analysis, it is demonstrated that R&D and export activity are relatively and significantly associated with most performance measures in SMEs across countries or industries (manufacturing vs. service and high-tech vs. low tech), but the strategic significance of other variables such as capital intensity, debt leverage, current ratio , and average collection period on performance tends to be different depending on the performance measure applied to a specific industry or country.

Key words: R&D Intensity, Export Activity, Accounting- and Market-based Performance, SMEs, and Cross-national Comparison.

A Comparative Approach to the Strategic Impact of R&D and Export Activity on Firm Economic Performance in Small Business Firms: U.S., Japan and Korea

Introduction

Exporting has been viewed not only as an avenue to improve profitability but also as a catalyst to sustain the firm's competitive advantage in the turbulent market, because of financial improvement, high capacity utilization, higher technological standards, attainment of a desired performance, and also secured base of survival (Kumcu, Harcar, and Kumcu 1995; Leonidou and Katsikeas 1996; Vanchan and MacPherson 2008). R&D has also been known as another key strategic factor to continually improve the product and services a company has to offer and /or the processes used to deliver the products and services and also to strengthen the competitive power in today's business world based on new technology innovation. Although there is still no discernable relationships between increased R&D spending and profitability (Morbey and Reithner 1990; Hanft 2005; Hartmann, Myers, and Rosenbloom 2006), technology innovation by R&D investment is the crucial incentive to improve the quality of the products and /or services across different industries and countries. The significance of R&D spending may also have a different impact on the firm performance by other factor like firm size and type of industry as well as different type of industry (Jefferson, Huamao, and Xiaojing 2006; Kafouros 2005; Lejarraga and Martinez-Ros 2008; Tomiura 2007).

The firms with export experience is an important source of productivity growth and profitability whereas the firm investment in R&D facilitates their ability to benefit from their exposure to the export market (Aw, Roberts, and Xu 2008). In addition to R&D and exporting, more importantly other key business strategic factors such as firm size, inventory turnover, current ratio, debt leverage, and credit collection policy have been drawn a high attention to academicians as well as practitioners in explaining the major impetus of firm performance. However, most empirical investigations of the firm's performance with respect to R&D and export activity have focused exclusively on large corporations. Even in a SME industry, most studies have centered on a single dimension of performance measures and a particular industry and/or country level with a homogeneous business and economic context (Jefferson, Huamao, and Xiaojing 2006; Johansson and Karlsson, 2007; Pianta and Vaona, 2007; Yasuda, 2005). Very limited studies have empirically explored the strategic significance of R&D and exporting in explaining firm performance with multiple dimensions of performance (Aulakh, Kotabe, and Teegen 2000; Calantone, Kim, and Cavusgil 2006; Gunner, Lee, Habte-Giorgis 2007) even in a large firm.

Therefore, this study primarily attempts to present a different perspective of R&D and export strategy by including other key strategic business factors and economic performance by using the small- and mid-sized corporations from the U.S. , Japan, and Korea. The main thrust of this study is to empirically explore and determine the directions and magnitudes of the relationships between key business strategic factors and economic performance (accounting-based and market-based performance) across different industry contexts (manufacturing vs. non-manufacturing and high-tech vs. low-tech) as well as different country settings. This study also test the interacting effect of such control variables as firm size, inventory turnover, credit collection policy, labor productivity, debt leverage, and capital intensity on the linkages between R&D and export activity and performance .

The prospective major findings would be of great importance because it not only identifies the key strategic elements that lead to success in diverse economic contexts, but also is useful to managers in determining the appropriateness of a certain competitive strategy in a given economic context. This study also contributes to a new strategic implication of R&D and export activity and the firm performance linkage in business and economic research, particularly with respect to a small-and medium- sized firms (SMEs).

Theoretical Background of The Study

Although it was limited to a particular industry and a single country context, the subject of R&D, export activity and performance has been widely studied. The logical consequences may exist between these two strategic factors (R&D and Exporting) and other interacting variables and eventually be geared to performance improvement regardless of firm size or industry across countries.

R&D and Export Activity:

It is widely accepted that the most critical relationship within the extensive business and economic literature is the inconclusive linkages between R&D and export and performance. Although there may exist some limitations in viewing performance as a single dimension of financial profitability measures, labor productivity, and/or export performance with respect to R&D, majority of empirical studies showed the significant existence of their direct and interactive strategic relationships. The firm with a higher investment in R&D appears to increases the profits from exporting, and a positive penetration into global markets by export raise the return to R&D investment (Aw, Robert, and Xu 2008).

R&D Intensity:

Technological innovation by R&D spending is at the core of business strategy for firms to compete in the competitive market. Most conventional research literatures suggest that firms that invest a large portion of their sales in R&D tend to experience more growth and profit than those that do not (Lee and Habte-Giorgis

2002; Ito and Pucik 1993; Morbey and Reithner 1990). Several studies have empirically investigated the relationship between R&D investment and performance and found that irrespective of industry and size, company growth increases along with R&D investment (Franko 1989; Johansson and Karlsson 2007). Such evidence exists in the export performance literature that suggests a positive relationship between the export performance of firms and R&D intensity (see, for example, Zhao and Zou 2002).

Export Strategy:

A firm can utilize exporting as a device for entering a market on a limited basis, with the intent of increasing its involvement at a later date. Benefits and advantages that the firm can take through exporting vary from product life cycle to lower cost, and higher profit (Czinkota and Ronkainen 1998). Additionally, exporting helps firms to gain economies of scale in production leading to price competitiveness. In certain industries, by selling abroad, firms can gain access to technology, and sophisticated consumers. This means that the firm can climb up the learning curve quickly and become more successful in both domestic and international markets. Exporting affords firms the opportunity to dispose of excess production (Cannon, 1981), to enter new international markets (Czinkota and Ronkainen 1998; Kotabe and Helson 2008), or to expand existing markets in foreign countries (Kamath, Rosson, Patton, and Brooks 1987). From a strategic perspective, the use of exporting as an avenue to increase revenues represents a more conservative approach to entering international markets. Although the effect of exporting on a firm's performance is still inconclusive, it is reasonable to contend that exporting can be one of the major sources for firm growth and profitability. When a firm promotes the exporting, it will achieve its financial goals by making profit in the export market, achieving sales growth, and attaining a large volume of sales (Lee & Habte-Giorgis 2004; Zou and Stan 1998). Hence, we expect that R&D intensity will positively affect the performance of exporting firms. Therefore, the following hypotheses are proposed:

H1 : R&D Intensity is significantly and uniformly associated with firm performance in SMEs across different industry context as well as country setting.

H2 : Export Activity is significantly and uniformly associated with firm performance in SMEs across different industry context as well as country setting.

Controlling Business Strategic Factors

Although there may exist some controversial issues in its selection, strategic factors such as firm size (Wijewardena and Cooray 1995; Wolff and Pett 2000), capital intensity (El-Osta, MacPhee, and Rosenbaum 1996; Ohmae 1990), debt leverage (Beard and Dess, 1981; Markides 1995), average collection period (Lee, Zahra, and Wongtada 1995), current ratio, and inventory turnover(Gaur and Kesavan 2005) are

generalized to investigate the strategic impact of R&D and export on performance with respect to various dimensions of firm economic performance across different level of industry and countries .

H3 : Business strategic factors such as firm size, capital intensity, debt leverage, current ratio, average collection period, and inventory turnover are not uniformly related to firm performance in SMEs across different industry contexts as well as country setting.

Firm Size: Samiee and Walters (1990) contended that firm size is likely to be one of the most significantly important considerations in industries characterized by indivisibility in critical factor inputs needed for exporting as well as technology development endeavors. Larger firm size affords companies several economic benefits due to their ability to exercise financial leverage in their respective markets even within the SMEs. Economies of scale, raw material costs, and production strategy are a few of the benefits larger firms employ because their structure allows for the minimization of operational costs. It is a general notion that firm size significantly affects the firm's economic performance as well as growth in the SMEs (Ural and Acaravci 2006; Wijewardena and Cooray 1995; Yasuda 2005) . Therefore, it is expected that firm size in a small-and medium-sized firms has a positive impact on firm performance.

H3a : Firm Size is significantly and uniformly associated with firm performance in SMEs across different industry context as well as country settings.

Capital Intensity: Although the theoretical context and explanation of the strategic impact of capital intensity on performance are not always consistent, capital intensity has been well validated as a major strategy factors in determining performance. It has been argued that companies are required to make capital investments to remain competitive and to maintain their company's growth (Balakrishnan and Fox, 1993). The application of resources toward capital assets usually represents the technological sophistication of the operations of the firm which enables it to achieve better quality and lower costs. Therefore we propose the following hypothesis:

H3b : Capital Intensity is significantly but differently associated with firm performance in SMEs across different industry contexts as well as country settings.

Collection Period: The ability of a firm to collect its accounts on time and its effective management is crucial to maintain its cash position. Shorter collection period reduces reliance on leverage for financing corporate activities. This is particularly important for exporting firms because timely collection provides relief of additional administrative burden of collection and reduces risk of doing business internationally. As a result, firms will be able to manage their finance more effectively and to have available cash to expand.

H3c : Collection Period is significantly and uniformly associated with firm performance in SMEs across different industry contexts as well as country settings.

Debt Leverage: Generally speaking, using more debt raises the riskiness of the firm's earnings stream through the foreign market, but more debt generally means a higher expected rate of return (Brigham 1982). It is well known that debt leverage is much higher in Pacific Rim countries, especially Japan compared to other countries like U.S. and Germany (Gunner, Lee, and Habte-Giorgis 2007). As one of the traditional the empirical studies in business strategy, Beard and Dess (1981) found that average leverage measured inversely by the ratio of equity to total assets has the theoretically correct negative sign and is statistically significant. Thus, relatively large amounts of leverage tend to raise industry profits rates, implying more debt leverage leads to greater risks. Thus, a higher debt is expected to have a negative impact on the firm performance particularly with respect to accounting based performance.

H3d : Debt Leverage is significantly and uniformly associated with firm performance in SMEs across different industry contexts as well as country settings.

Inventory Turnover: The inventory turnover can provide more accurate barometer of business success when it is combined with other measurement such as customer service level and return on investment. In a study of the inventory turnover performance of retailers in the U.S. retail sector, Gaur and Raman (2005) empirically demonstrate that inventory turnover of a firm is positively correlated with both size and sales growth but strongly negatively correlated with gross margin and also positively with capital intensity. The result indicates that the strategic impact of inventory turnover will vary with different performance measures and industry contexts.

H3e : Inventory Turnover is significantly and uniformly associated with firm performance in SMEs across different industry contexts as well as country settings.

Empirical Design and Methodology

Samples and Data Collection

All samples are primarily selected based on the number of employees with less than 500 with respect to the main motives of this study in small- and medium-sized firms (SMEs). The sample for Japanese and Korean firms was drawn from the *Compact-D World Scope* while the U.S. firm was drawn from the CompuStat *Research Insight* because of its insufficient sample size for the U.S. SMEs in the *World Scope*. Initial data were matched with the economic financial performance and other control variables. (see Table 1). All data for variables employed were taken from Word Scope and Research Insight (mainly for U.S. firms and replenishment for missing data in R&D for Japanese and Korean firms) for the period 2001 through 2005. Because our sample is a quasi-panel dataset and has missing values for some firms and years, we use aggregated averages of all the variables tested in this study for the period through 2001 through 2005.

Description and Measurement of Variables

In order to investigate the firm performance in a SME industry in the U.S., Japan and Korea the following measurements were used as proxies for dependent, independent, and control variables.. All variables used in this study were measured as five-year averages between 2001 and 2005. Given that the variables studied in this research will fluctuate from year-to-year, it was determined to use five-year simple averages.

Firm Performance: In order to gain more accurate and generalized results, and to minimize possible weaknesses associated with the use of any single performance, this study considered the composite indices of performance measures stemming from accounting-based performance and market-based performance. First, three indices were employed to measure accounting-based performance such as (1) **ROAA** which indicates the firm's ability to utilize its assets to create profit, (2) **ROAE** which indicates how well the firm is doing its attempt to maximize shareholders' wealth, and (3) **ROAS** which indicates what percent of every sales dollar the firm was able to convert into net income. More specifically, they are operationalized in the following manner:

$$\text{ROAA} = (\text{Earnings before Interest \& Tax}) / (\text{Total assets})$$

$$\text{ROAE} = (\text{Earnings before Interest \& Tax}) / (\text{Common shareholders' Equity})$$

$$\text{ROAS} = (\text{Earnings before Interest \& Tax}) / (\text{Total Sales})$$

Second, three market-based performance indices were used to reflect the investors' expectations about future profit and to provide the robustness of results: (1) **Tobin's Q** is a measure of the growth prospects of the firm and the rents from more long-term or tangible assets. (2) **Market Value** is the amount a firm could be sold for as a continuing operating business in the stock marketplace and also indicates the firms operating power to generate positive cash flows to security investors in determining the value of the firm's financial securities. (3) **Sales Growth** as one of other market-based measures of performance in this study is a 5-years average market growth rate in sales (i.e., the indication of the firm's market growth). More specifically, three indices of market-based performance are operationalized in following manner:

$$\text{Tobin's Q} = (\text{Market value of shareholder's equity} + \text{Liquidating value of the firm's outstanding preferred stock} + \text{Book value of total debts}) / (\text{Book value of total assets})$$

(ref. Chung & Pruitt, 1994)

$$\text{Market Value} = \text{Ln}(\text{Year end closing stock price}) * (\text{Common shareholders' outstanding})$$

$$\text{Sales Growth} = (\text{Sales}_t - \text{Sales}_{t-1}) / (\text{Sales}_{t-1})$$

Key Strategic Variables: In line with the main theme of this paper, R&D and export activity were employed as two key strategic variables in this study. (1) ***R&D Intensity:*** R&D intensity is computed as the ratio of book values of R&D expenditure to the total sales (= R&D Expenditure / Total Sales). The technological capability embodied in firms is crucial to the firm performance particularly with respect to the foreign market expansion by export activities. (2) ***Export Activity:*** Export activity is computed as the ratio of a firm's foreign sales to total sales (= Sales by Export / Total Sales).

Strategic Control Variables: Since the strategic linkage between R&D and export activity and firm performance is influenced by strategically important resources, it is deemed necessary to control for certain potential confounding variables that are potentially important in a SME industry. The control variables incorporated in this study employs six business factors, namely, firm size, capital intensity, debt leverage, current ration, inventory turnover, and average collection period. In addition, two industry dummy variables (manufacturing vs. service and high-tech vs. low-tech) were also employed to investigate the different influence on the key strategic factors and performance by different type of industry that may exist. Each of these control variables were operationalized in the following manner:

Firm Size = Natural log value of Total Sales (US\$ based)

Capital Intensity = Total Assets / Total Sales

Debt Leverage = Book value of Total Debt / Shareholder's Equity

Current Ratio = Current Assets / Current Liabilities

Inventory Turnover = Cost of Goods Sold / Average Inventory between t and t-1

Average Collection Period = [(Account Receivables)* 360]/Total Sales

Industry Dummy: Manufacturing (1) vs. Service (0); High-tech (1) vs. Low-tech (0)

Empirical Model and Statistical Methods

To investigate the impact of R&D and export strategy on a firm's economic performance (accounting-based and market-based performance) in a SME industry across three countries such as U.S., Japan and Korea, a series of hierarchical regression model was employed. As presented below, all control variables were entered in the first step of the regression model. In order to be able to provide a more rigorous test of the key strategic variables under study, two strategic variables (R&D intensity and export strategy) and their individual effects on firm performance were separated from the variables being investigated. The following three steps of hierarchical regression models including dummy variables for different industry contexts were employed separately for the U.S., Japanese and Korean firms.

Performance (Accounting-based and Market-based Performance) =

Step 1: Control variables (Industry Dummy1, Industry Dummy 2, Firm size, Capital Intensity, Current Ratio, Debt leverage, Inventory Turnover, Average Collection Period)

Step 2: Control Variables including Industry Dummy 1 & 2, R&D Intensity

Step 3: Control Variables including Industry Dummy 1 & 2, R&D Intensity, and Export Activity

where, Industry Dummy 1: Manufacturing (1) vs. Non-manufacturing (0)

Industry Dummy 2: High-tech. Industry (1) vs. Low-tech Industry (0)

Empirical Analysis and Discussion

Descriptive Statistics and Correlation Analysis

The mean and standard deviations of all variables (eight strategic variables and 6 performance measures) including employee productivity across countries are displayed in Table 2. For the firm's performance measures, Japanese firms show higher means for all accounting performance (ROA, ROE, ROS), and market value than two other countries whereas the U.S. firm show higher means for Tobin's Q and growth rate in sales (GRS) than that of Japanese and Korean firms. But the U.S. firms show slightly higher ratio in market value of a firm's existing share capital to the replacement cost of the firm's physical assets (thus, replacement cost of the share capital) and sales growth rate. Particularly, a lower growth rate in sales (GRS) in Japan and Korea is in contrast to the traditional assumption of performance goals in SMEs. Even this study employs relatively compatible size of SMEs, the U.S. firm appear to be smaller than that of two other countries. The means of strategy variables exhibit that Korean firms (1.143% and 16.65% in R&D intensity and export activity, respectively), on average, tend to spend more in R&D, and exhibit higher portion of export intensity than that of the U.S. (0.987% and 8.30%) and Japanese (1.083% and 15.57%) firms during the 2001-2005.

Insert Table 1 and 2 Here

Tables 3-(a)(b)(c) present the intercorrelations between eight strategic variables and six different performance measures for the U.S., Japanese, and Korean firms. Even if it is different in the sign of correlation coefficient, the intercorrelations among key strategic variables tend to be significantly correlated with firm performance across countries. R&D intensity and export activity are significantly correlated with performance measures across countries. In addition, we performed collinearity diagnostics by examining the bivariate correlations and variance inflation factors and found that the problem of multicollinearity does not appear to exist (i.e., variance inflation factors are below 2.05).

Insert Table 3-(a)(b) & (c) Here

R&D is positively correlated with all market-based performance but negatively with accounting performance in both the U.S. and Japanese firms. For Korean firms, R&D intensity and export activity are significant with respect to all performance measures but R&D is negatively correlated with accounting performance (ROAA, ROAE, and ROAS). Firm size in SMEs was significantly and positively correlated with all performance measures regardless of different dimensions of performance measures across countries at least at 5% level. That is, the firm size even in SMEs is likely to be considered as one of the most validating determinants in explaining the firm performance across different country setting. Besides firm size, other controlling variables are not uniformly interrelated with most performance measures, particularly with respect to different indices of performance measures in the three country setting.

Insert Table 3-(a)(b)(c) Here

In summary, the impact of strategic factors on performance seems to be varied across countries, subject to which performance measures to employ. But export activity, firm size, and current ratio tend to be significantly and positively correlated with most performance measures regardless of different indices of performance across countries. R&D intensity and capital intensity is negatively correlated with accounting-based performance (it is significant in the US SMEs only) but positively correlated with market-based performance in SMEs across countries. Debt leverage is uniformly negatively correlated with all performance in SMEs across countries. Other variables such as inventory turnover and average collection period are not likely to be uniformly correlated with performance with respect to different performance measures across countries.

Result of Hierarchical Regression Analysis

Using hierarchical multiple regression analysis, the empirical models shown previously are estimated separately with six indices of performance (accounting-based and market-based performance). Furthermore, this analysis is used to examine the significant impact of each strategic factors on various performance measures by industry context (manufacturing vs. non-manufacturing and high-tech vs. low-tech) across three countries. As presented in Tables 4-(a) for the U.S. firms, 4(b) for Japanese firms, and 4(c) for Korean firms, the hierarchical regression analysis with 3 steps are used to empirically explore the nature of the relative significance of R&D and export activity on the firm's various indices of performance, after controlling for all control variables and one of two key strategy variables (R&D intensity and export activity) in a separate and simultaneous step of model. From the tables for the U.S., Japanese, and Korean SMEs, all regression models were highly significant ($p < .01$ except ROAE in the U.S. firms), indicating that the multiple regression

models were useful in exploring the major determinants of firm performance in SMEs across different industry context and countries. More importantly, all models including R&D and export activity are more useful for exploring the simultaneous effect of R&D and exporting on the firm performance (adjusted R^2 has significantly increased except in a few models), indicating the existence of improving effect of R&D and export strategy on the basic link between the controlling strategy and performance across countries. Therefore, this result provides more confidence in contending that even when other business strategy factors are held constant, the firm's concentration on R&D and exporting is more likely to be conducive to improving the firm's performance regardless of different indices of performance measures.

Insert Table 4-(a)(b)(c) Here

Conclusions and Implications

This study is an attempt to empirically examine the nature of strategic impact of R&D and export activity on business performance in small- and medium- sized firms (less than 500 employees) under diverse economic environments such as the U.S., Japan and Korea. Particularly, this study explores the directions and magnitudes of the operational relationships between key strategic factors such R&D intensity to develop a new product and market, export by foreign trade and the firm's economic performance with respect to diverse dimensions of performance such as accounting (ROE, EOA, ROS)- and market (Growth in Sales, Market value, Tobins'Q)- based performance. Although the main focus of this study is on the significant relationships between R&D and Export activity and performance, this study also explore how other business strategy factors such as firm size, inventory control and management, credit polity to promote sales, debt leverage, labor productivity and capital intensity are linked to the firm's economic performance in the U.S., Japanese and Korean SMEs.

With respect to the main theme of our study, the strategic relationships between all strategy variables and performance do not seem to be clear cut as was expected, particularly with respect to various dimensions of performance measures. As we proposed, however, R&D and exporting appear to be most distinctive strategic determinants for improving performance regardless of different performance measures across countries, after holding all other business strategy variables constant. But the relative contribution of these two significant strategies is not alike. Export activity shows significant and positive impact on firm performance regardless of different measures, while R&D intensity shows a positive impact on market-based performance measures only. Accordingly, R&D and exporting are more likely to be distinctive and significant driving forces in explaining all forms of performance measures in SMEs regardless of the difference in business and economic environments. This result strongly supports the previous findings that

exporting is a significant determinant for profitability, growth, and secure investment (Balabanis 2001; El-Osta, MacPhee, and Rosenbaum 1996; Lee and Habte-Giorgis, 2004; Wolff and Pett 2000). It is also noteworthy that firm size also found to be significantly associated with performance in SMEs across countries as well.

This study also highlights the relative significance of R&D and exporting for determining performance across two different industry contexts, manufacturing vs. services and high-tech vs. low-tech. Although the result shows that the efficacy of different industry context varies depending on different performance measures across countries, industry differences appears to be more significant with respect to market-based performance than with respect to accounting-based performance, particularly in Japanese and Korean SMEs. More significantly, the relative impact of most strategy variables including R&D and export activity on performance appears to be different by technology-intensified industry (high-tech vs. low-tech) with respect to market-based performance across countries under this study. This indicates that R&D and exporting are more significant to improve market-based performance in a high-tech industry than in a low-tech industry across different countries.

REFERENCES

- Adams, William J.(1976). "International Difference in Corporate Profitability," *Economica*. 43, 367-379
- Aulakh, Preet S., Masaaki Kotabe and Hildy Teegen (2000). "Export Strategies and Performance on Firms from Emerging Economies, Evidence from Brazil, Chile, and Mexico," *Academy of Management Journal*, 43 (3), 342-361.
- Aw, Bee Yan, Mark J. Roberts, and Winston, Tor (2007). "Export Market Participation, Investments in R&D and Worker Training, and the Evolution of Firm Productivity," *World Economy*, 30(1), 83-104
- Aw, Bee Yan, Mark J. Roberts and Daniel Yi Xu (2008). "R&D Investments, Exporting, and the Evolution of Firm Productivity," *American Economic Review, Papers & Proceedings 2008*, 98(2),451-56
- Balabanis, George I. (2001). "The Relationship Between Diversification and Performance in Export Intermediary Firms," *British Journal of Management*, 12, 67-84.
- Beard, Donald W. and Gregory Dess (1981). "Corporate level Strategy, Business level strategy, and Firm performance. *Academy of Management Journal*, 24 (4), 663-638.
- Bettis, R.A., and V. Mahajan, V. (1985) "Risk/return Performance of Diversified Firms," *Management Science*, 31, 785-799.
- Boute, R., M. Lambrecht M., O. Lambrechts O.and P. Sterckx (2007). "An analysis of inventory turnover in the Belgian manufacturing industry, wholesale and retail and the financial impact on inventory reduction," *FETEW Research Report (KBI-0725)*, K.U.Leuven, 1-13
- Brigham, Eugene E. (1982). *Financial Management: Theory and Practice*, The Dryden Press.

- Calantone, Roger, J., D. Kim, J.B. Schmidt, S. T. Cavusgil (2006). "The Influence of Internal and External Firm Factors on International Product Adaptation Strategy and Export Performance, A Three Country Comparison," *Journal of Business Research*, 59(2), 176-185.
- Cannon, T. (1981). "International and export marketing," *In Management Bibliographies & Reviews*, 5. Ed., B.O. Pettman. West Yourshire, UK: J. Ward.
- Cavusgil, Tamer and Shaoming Zou (1994). "Marketing Strategy-Performance Relationship, An Investigation of the Empirical Link in Export Market Ventures," *Journal of Marketing*, 58, 1-21.
- Chung, Kee H. and Stephen Pruitt (1994). "A Simple Approximation of Tobin's q," *Financial Management*, 23 (3), 70-74
- Czinkota, M., I.A., Ronkainen, and B. Donath (2004). *Mastering Global Markets: Strategies for Today's Trade Globalist*. Mason, OH: South-Western Publishing.
- El-Osta, Barbara. Craig R. MacPhee, and David I. Rosenbaum (1996). "International trade, Foreign, Direct Investment, and Domestic Market Performance," *Eastern Economic Journal*, 22 (1), 63-74.
- Franko, L.G. (1989). "Global corporate competition, Who's winning, who's losing, and the R&D factors one reason why," *Strategic Management Journal*, 10, 449-474
- Gaur, V., M.L. Fisher, A. Raman. 2005. An Econometric Analysis of Inventory Turnover Performance in Retail Services. *Management Science*, 51. 181-194.
- Guner, Berrin, Jooh Lee, and Berhe Habte-Giorgis (2007). Strategic Orientation and Export Performance, A Three-Country Study of Manufacturing Firms. *Journal of Transnational Management*. 12 (2), 61-77.
- Hall, Jr. and Lee, Jooh (2008). Assessing the Impact of Export Performance, A Critical Analysis of its Effect on Diversification. *The Journal of Global Business Management*, 4(1), 56-65
- Hanft, Adam (2005). "The Investment Trap," *Inc. Magazine*, 144.
- Hartmann, George C., Mark B. Myers and Richard S. Rosenbloom. (2006). "Planning Your Firm's R&D Investment," *Research Technology Management*, 49(2), 25-36.
- Ito, Kiyohiko and Vladimir Pucik (1993). "R&D Spending, Domestic Competition and Export Performance of Japanese Manufacturing Firms," *Strategic Management Journal*, 14(1), 61-75.
- Jefferson, Gary H., Bai Guan Huamao and Yu Xiaoyun Xiaojing (2006). "R&D Performance in Chinese Industry," *Economics of Innovation & New Technology*, 15(4/5), 345-366.
- Johansson, Sara and Charlie Karlsson (2007). "R&D accessibility and regional export diversity," *Annals of Regional Science*, 41(3), 501-523.
- Kafouros, Mario I. (2005). "R&D and Productivity Growth, Evidence from the UK", *Economics of Innovation & New Technology*, 14 (6), 479-497.
- Kamath, S., P.J., Rosson, and M. Brooks (1987). "Research on Success in exporting: Past, present, and future," *In Managing Export Entry and Expansion*, Eds. P.J. Rosson and S.D. Reid. NY: Praeger.

- Kim, Il-Won, Ja Song (1991). "A Comparative Study on Performance Evaluation Systems of Major Corporations in Korea, Japan, and the United States," *Advances in International Accounting*, 4, 107-122
- Kotabe, M. and K. Helsen (2008). *Global Marketing Management* (4th Ed.), New York: John Wiley.
- Kumcu, E, T. Harcar, and M.E. Kumcu. (1995). "Managerial perceptions of the adequacy of export incentives programmers, Implications for export-led economic development policy," *Journal of Business Research*, 32, 163-174.
- Lang, L.P. and R.M. Stulz (1994), "A Tobin's q Corporate Diversification and Firm Performance," *Journal of Political Economy*, 102(6), 1248-1279.
- Lee, Jooh and David E. Blevins (1990). "Profitability and Sales Growth in Industrialized Versus Newly Industrializing Countries," *Management International Review*, 30 (1), 87-100.
- Lee, Jooh and Berhe Habte-Giorgis Behre. "Empirical Approach to the Sequential Relationships between Firm Strategy, Export Activity, and Performance in U.S. Manufacturing Firms," *International Business Review*, 13 (1), 141-201.
- Lee, Jooh, Shaker A. Zahra and Nittaya Wongtada (1995, "A Comparative Study of Leading American, Japanese, and Korean Corporate Strategy and Financial Performance," *Journal of Asia-Pacific Business*, 1(1), 65-95.
- Lejarraga, Jose and Easter Martinez-Ros (2008). "Comparing small VS large firms' R&D productivity through a dual process perspective," *Academy of Management Proceedings*, (2008), 1-6
- Leonidou, Leonidas and Constantine S. Katsikeas (1996). "The Export Development Process, An Integrative Review of Empirical Models," *Journal of International Business Studies*, 27(3), 517-551
- Lieberman, M.B., L. Demeester (1999). "Inventory Reduction and Productivity Growth, Linkages in the Japanese Automotive Industry," *Management Science*, 45, 466-495.
- Markides, Constantinos C. (1995). "A Diversification, Restructuring and Economic Performance," *Strategic Management Journal*, 16, 101-118.
- Marsh, P. (2003). "Valuing value added, BUSINESS PERFORMANCE, Investors have a hard time assessing how well companies turn the skills of their employees into goods and services, A new scoreboard system may help," *Financial Times*, 14, 13-15
- Miller, D. (2004). Firms' Technological Resources and the Performance Effects of Diversification, A Longitudinal Study," *Strategic Management Journal*, 25, 1097-1119.
- Morbey, Graham and Robert Reithner (1990). "How R&D Affects Sales Growth, Productivity, and Profitability," *Journal of Engineering and Technology Management*, (May-June), 11-14.
- Ohmae, Kenichi (1990). *Becoming a Triad Power, The New Global Corporation, in International Marketing Strategy*, Hans Thorelli and Tamer Cavusgil, Eds. Oxford, Pergamon Press.
- Pianta, Mario and Vaona, Andrea (2007). "Innovation and Productivity in European Industries," *Economics of Innovation & New Technology*, 16(7), 485-499.

- Samiee, S. and G.P. Walters (1990). "Influence of firm size on export planning and performance," *Journal of Business Research*, 20, 235-248.
- Tawfik, M.(1990). "Inventory Performance in Egyptian Industry, Analysis and Insights," *Industrial Management + Data Systems*, 90 (3), 1-7
- Tomiura, Eiichi (2007). "Effects of R&D and networking on the export decision of Japanese firms," *Research Policy*, 36(5), 758-767.
- Ural, Tulin; Acaravcı, Songul Kakilli. (2006). "The Effects of Firm's Strategic Factors on Export and Firm Performance, A Comparison of Permanent and Sporadic Exporters," *Problems & Perspectives in Management*, Issue 4, p42-62
- Vanchan, Vida and Aina MacPherson (2008). "The Competitive Characteristics of US firms in the Industrial Design Sector, Empirical Evidence from a National Survey," *Competition & Changes*. 12 (3), 262-280
- Wijewardena, Herna and Shiran Cooray (1995). "Determinants of Growth in Small Japanese Manufacturing Firms, Survey Evidence from Kobe," *Journal of Small Business Management*, 33 (4), 87-92
- Wolff, James A. and Timothy L. Pett. (2000). "Internationalization of small firms, AN examination of export competitive patterns, firm size, and export performance," *Journal of Small Business Management*, 38 (2), 34-47.
- Yasuda, Takehiko (2005). "Firm Growth, Size, Age and Behavior in Japanese Manufacturing," *Small Business Economic*, 24(1), 1-15.
- Zhao, H. and Zou (2002). "The Impact of Industry Concentration and Firm Location on Export Propensity and Intensity: An Empirical Analysis of Chinese Manufacturing Firms. *Journal of International Marketing*, 10(1), 52-71.
- Zou, Shaoming and Simona Stan (1998). "The Determinants of Export Performance: A Review of the empirical literature between 1987 and 1997," *International Marketing Review*, 15(5), 333-356.

***** A full paper including tables are available upon request ******

The Management System of Changwon Innovative Cluster: "Mutual benefits between Large and Small Firms"

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Changwon Cluster Development Agency (CCDA) has established a business model to support all processes for commercializing activities. The CCDA leads the cooperation between members through mini-cluster activities (Membership), activates of the field investigation to resolve the bottlenecks of members deduced by the activities (Bottom-Up) and providing the services such as mentoring by specialist, connecting to the other support businesses etc. (Brokering).

Mini-cluster is an industry-academic cooperative partnership composed to expand the business opportunities and activate the information exchange of regional members. There are five mini-clusters in 2008; Machine tool, Molding, Metal and Material, Trans equipment and Mechatronics. This new trend contributes to creating a Korean style innovative cluster.

This paper argues that how Changwon innovative cluster has created the concept of total care service model for mutual benefits between large and small firms by use of Total Care Service system.

Track: 9. Relationships between Large and Small Firms

FORMULATING DIFFERENT COMPETITIVE REPERTOIRES BETWEEN LARGE & SMALL TELECOM OPERATORS

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Telecom operators have made efforts to adjust their strategic actions against environmental changes. One of the most significant phenomena accompanying this shift has been the growing number of strategic alliance activities. Strategic alliances are used as effective and popular ways of expanding products and service coverage beyond their existing service/product boundaries (Joshi et al., 1998; Noda & Collis, 2001; Smith & Zeithaml, 1996). This paper investigates an interesting mechanism of competitive repertoires between large and small telecom operators in the US telecom service industry context.

Track: 9. Relationships between Large and Small Firms

Improving Lead Organization and Supplier Interaction – A Case Study

Miko Laakso, Matti M. Hämäläinen and Anders Häggman

Studies have presented mixed results of the impact of supplier involvement in new product development activities (NPD). This inconsistency highlights the importance of examining the causal relationships behind the problems faced in joint NPD operations. This paper describes the findings of a case study of improving the NPD operations and interaction between a large lead organization and the small and medium-sized suppliers. The research was conducted by utilizing an employee-driven participative approach with the aim of advancing the common overall view of the network operations. The findings highlight the importance of well-functioning personal relationships between the suppliers and the lead organization.

Introduction

All too often the voice of small operator in a supply chain network goes unheard at the large lead organization. Network operations are typically managed from the viewpoint of the lead organization, with suppliers adjusting to its prevailing practices. In many cases this lack of overall view of the network processes and interactions leads to inefficiency and overlap resulting in added cost for both the suppliers and the lead organization. Furthermore, academic studies have shown mixed results of success of New Product Development (NPD) within supply chain networks (Wagner and Hoegl 2006). Even though companies across industries have been reported to increasingly involve suppliers in NPD

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activities, as well as increasing outsourcing, the benefits to be gained are not completely clear. Many researchers have perceived significant benefits associated with supplier involvement, while others have repeatedly found no positive correlation or have showed negative impact of supplier involvement on key performance outcomes (Wagner and Hoegl 2006). Several studies have concluded, that involving suppliers in NPD is a far more complex issue than generally described in the literature, that can result in major benefits but requires a great deal of understanding and effort (Wynstra, Van Weele and Weggemann 2001; Corswant and Tunälv 2002). This highlights the importance of combining the knowledge of all parties within a network for examining the causal relationships behind the problems faced in joint NPD actions. Also, majority of empirical studies on supplier involvement in NPD are based on high-tech manufacturing firms and automotive industry (Wagner and Hoegl 2006). These results might not be fully representative of the realities within other industries and especially with networks consisting mainly of SMEs. This paper describes the execution and findings of a case study with the aim of improving the operations and interaction between the lead organization and the suppliers in a supply chain network. The suppliers in the studied network are small and medium-sized enterprises (SMEs) providing both physical components and services, namely design.

The employees' resistance to change and lack of personal interest has often damaged the execution of new practices and procedures within individual companies and supply chain networks alike, even when there would have been clear benefits to all parties. The implementation of new inter-organizational strategies or practices is ultimately in the hands of individual employees. Therefore the motivation and lack of resistance among affected personnel is crucial. Several studies conducted during the span of more than half a decade (e.g. Coch and French 1948; Tyler 1987) have shown that employee frustration and the resulting resistance to change could be reduced by effective communication of the need for change and participation in planning the changes. However, we feel that

the participative approach has not been exploited adequately in change processes and operations improvements within supply chain networks. The aim of the described study was to generate operational improvements by utilizing a participative approach in order to advance the common overall view of the causal dependencies behind the problems in the network operations and interactions. The process aimed to bring together the views of the large lead organization and supplier SMEs. The process was carried out using an employee-driven improvement and research method called the 3A Workshop Procedure (3AWP), which is described in appropriate detail in the methodology and results sections.

Review of Literature

Lead organization – supplier interdependencies and interaction

Studies have produced mixed results regarding the consequences of supplier involvement in new product development with many researchers associating significant benefits with supplier involvement, while others have repeatedly found no positive correlation or have shown a negative impact of supplier involvement on key performance outcomes. (Wagner and Hoegl 2006)

Regardless of this disagreement, it is obvious that no economic activity can be analyzed without considering the social context in which it occurs (Granovetter 1985). As the interdependencies between firms are increasing, these interdependencies must be acknowledged and managed properly, or the company cannot survive in the continuously changing environment and tough external competition (Park and Krishnan 2001). The depth and strength of cooperation between any two companies is characterized by the personal relationships between individual employees, working at all levels where transactions take place between the companies (Barnir and Smith 2002).

Historically the relationships between lead organizations and suppliers tend to be continuous and stable over long periods of time (Eccles 1983), even though the relationships have typically not been planned ahead or controlled in any systematic way. However, there is an increasing demand for controlled interaction between buyers and suppliers due to, for example, limited resources (Park and Krishnan 2001) Rapid changes occurring in the market environment only aggravate the underlying problems. Management of interdependencies can indisputably be beneficial to the network as a whole, and therefore it should be done in a controlled fashion. Just as Frederick Taylor reasons in *The Principles of Scientific Management* (1911) that the principal objective of task management (or “Scientific Management”) is to ensure maximum profits for both the employer and the employees, the principal objective of interdependency management could be stated as *ensuring maximum profits for both the lead organization and the suppliers*. The interdependency management should therefore be attended by all parties involved in the order-to-delivery process, and could possibly be executed by an objective outside facilitator.

The success of an SME is largely dependent on the informal personal networks to the extent that the social network can be considered a source of competitive advantage for the company (Premaratne 2001, Barnir and Smith 2002). When large firms focus their efforts on their core business and core competencies, and outsource all the activities in which they lack expertise, their relationships with suppliers become a critical factor to the success of the entire business (Park and Krishnan 2001). However, along with outsourcing, the companies are prone to shift a significant amount of their risks to the suppliers (Barnir and Smith 2002), and this is bound to create some friction between the companies unless a mutual understanding can be found on the way to deal with issues resulting from this arrangement. Long relationships also have a tendency to become stagnant, which may create incentives on the supplier’s side to reduce the output quality, if the cost level is not kept up-to-date (Granovetter

1985). Additionally, the individual workers have a tendency to slow down their working pace as much as possible, if they begin to feel excessively secure about their positions within the company (Taylor 1911). This effect could possibly be avoided or at least reduced by actively involving the employees in any inter-organizational negotiations, so that the employees could provide information and gain understanding about the realities of the factual order-to-delivery process.

Participative change management

The described case study of a supply chain network was conducted using a participative, employee-driven approach. Employee-driven problem solving has been recognized as one of the most important management innovations of the 20th century (Hamel 2006) and several authors have concluded its effectiveness (e.g.: Ichniowski, Shaw and Prennushi 1997; Godard and Delaney 2000; Black and Lynch 2001). However, we feel that it still remains underused as a tool for operations improvement in supply chain networks consisting mainly of SMEs. In the following, the general concept of participative change management is discussed.

The basic premise of participative change management is based on the idea that employees can be more than mere pawns; they can be problem solvers, innovators and change agents (Beer and Eisenstat 2000). Toyota has embraced this school of thought, which is perceived as one of the main reasons why Toyota has been four times more efficient than their North American competitors (Hamel 2006; Kennedy 2003). Furthermore, successful organizational change is increasingly based on generating employee support and enthusiasm for proposed changes, instead of simply overcoming resistance to change (Piderit 2000).

Traditionally organizations have been structured in a highly top-heavy manner, in which most of the power is concentrated, and decisions made, at the top level. Fittingly, Beer et al. have found that the greatest challenge standing in the way of company renewal is often the deep-rooted perception of top management that companywide change comes with instituted change programs (Beer, Eisenstat and Spector 1990). Senior managers often believe, incorrectly, that in order to execute a well devised change plan it is sufficient to simply communicate it to the employees, and it will automatically be put into action throughout the company. Their perspective on change is often limited, and based on programmatic change initiatives that do not tackle the root causes of the problems, (Beer and Eisenstat 2000) resulting in the fact that the majority of change initiatives fail (Schein 1995; Beer, and Nohria 2000).

Employees also often feel that the problems experienced by the company result from poor management and leadership, instead of poor employee commitment or competence (Beer and Eisenstat 2000). To make matters worse, when one program fails, senior managers often try another, and when that fails, they try yet another, instituting a rapid progression of new programs which only aggravates the underlying problem (Beer, Eisenstat and Spector 1990). In companies which have undergone sustained organizational change, the driving force for that change has seldom come from programmatic plans with empty promises of increasing “participation” or changing the company “culture”. Instead, long-lasting change has often been achieved when employees have been the actual driving force (Beer, Eisenstat and Spector 1990).

Since senior managers are so distant from the daily activities of their employees, change programs are often constructed to be very general in nature, so that they would fit everyone and everything within the organization. This often leads to the fact that the programs fit no one particularly well, and do not focus on any specific problems. Empty phrases are constructed and the key issues are not addressed

(Beer, Eisenstat and Spector 1990). The disillusionment of failed programs often turns the initial enthusiasm of the employees into resentment, frustration and a rise in cynicism, thereby resulting in a counter-productive net effect (Beer, Eisenstat and Spector 1990; O'Brien 1995). Even if the initial enthusiasm and commitment to change is generated by senior managers, by helping the employees create a shared vision of the problems within the company and creating an atmosphere suitable for change, the actual change must always be accomplished by the employees and low level management who are "close to the action", since success depends far less on the implementation of change programs, than it does on the environment in work groups (O'Brien 1995; Beer, Eisenstat and Spector 1990; Beer and Eisenstat 2000; Beer and Nohria 2000).

Research seems to suggest that changes are more frequent at lower levels of an organization, and that changes at higher levels are fewer and slower, albeit more significant, but perhaps more importantly, changes at higher levels of an organization tend to be less complete (Mintzberg and Westley 1992). Senior management need to be willing to restructure and change as well, in order to avoid a conflict between the dynamic and changing work units and themselves (Beer, Eisenstat and Spector 1990). The reluctance of senior management to change may be caused by a fear of losing power. Friction between "stagnant" and "changed" parts within an organization can cause the collapse of the whole change process, and therefore, managers from innovative units should be moved to lagging ones, and managers who are unwilling or unable to change may have to be replaced (Beer, Eisenstat and Spector 1990; Beer and Nohria 2000; Beer and Eisenstat 2000).

In addition to being willing to change, another important task for top-level management is communication. Communication is very important for a variety of reasons. Firstly, poor communication may give the impression that senior managers are not willing to engage in open discussion, which in turn may dissuade employees from voicing their concerns. Secondly, even if

employees are willing to voice their concerns, if they do not have a clear sense of where the business is headed, they may be unable to warn management about impending disasters or problems which they may have spotted (O'Brien 1995). According to Beer and Eisenstat (2000), a top-down management style is often the main obstacle to sincere upward communication. Furthermore, depriving employees of the possibility to voice their concerns and take part in the decision-making process, may lead to a rise in cynicism, (O'Brien 1995; Reichers, Wanous and Austin 1997) although Pasmore and Fagans (1992) argue, that simply involving employees in the decision making process is not beneficial for the change process, and that increased involvement should also be accompanied by programs that aim to increase the skills and abilities of the employees as well.

Good communication is beneficial in other ways as well. Providing work teams with relevant information on faults, in a clear manner which they can understand, makes them more willing to act and increases the possibility that the work teams will take the initiative to correct the faults and errors themselves (O'Brien 1995; Kahn (ed.) 2005). Senior management should therefore specify a clear general direction, spread information and lessons learnt from both successful and unsuccessful changes throughout the company, and encourage experimentation without requiring specific methods or solutions to be implemented (Beer, Eisenstat and Spector 1990; Beer and Nohria 2000).

Without top level management support, company-wide change will inevitably fail, (Beer, Eisenstat and Spector 1990; Kahn (ed.) 2005) but at the same time, trust and employee empowerment are critical in creating a corporate culture in which sustained organizational change can be achieved (Szamosi and Duxbury 2002), and without employee support change efforts will fail or have very limited success (Reichers, Wanous and Austin 1997).

Methodology

The case study described in this paper is part of a broader multi-case study focusing on small and medium-sized enterprises (SMEs) and product development networks involving SMEs with the lead organization being either an SME or a larger organization. Two different approaches were used in the research; studies of individual SMEs with the focus on their internal behavior, and studies of networked activities with the focus on both the internal behavior of the lead organization and the network operations and interfaces between different network actors. This paper describes a case study of a network with a large lead organization and small and medium-sized suppliers.

The research has adopted a case study approach in order to generate profound understanding of the causal relationships of problems and challenges faced by SMEs in their innovation efforts. The focus of the case study is on the investigation of the studied phenomena in a real-life context, which highlights the importance of having qualitative data of the case in order to gain deep understanding of the studied phenomenon (Yin 2003). The participative research method utilized in the case studies, the 3A Workshop Procedure (3AWP) utilizes tools such as questionnaires, interviews, facilitated workshops and documents and records.

The 3A Workshop Procedure

The 3AWP is a structured workshop procedure that aims to create a common understanding and consensus among the lead organization and suppliers, and to generate concrete operations improvement actions. The procedure identifies and examines both explicit and underlying problems of the network operations, produces estimates of the error costs related to the discovered problems and generates improvement initiatives to counter them.

The method was initially developed at the Helsinki University of Technology (Järvinen, Artto and Aalto 2000; Järvinen, Lillrank and Malmi 2000) and has since been further developed by the 3A Institute Ltd. The name 3A is derived from the three sequential workshops for different organizational levels called the Assessment, Algorithm and Action workshops. The process was supplemented in 2006 by the 3A Institute Ltd with an additional workshop called the Task Force Workshop which concentrates on evaluating the error cost related to the discovered problems. The literature on the procedure is somewhat outdated and therefore its execution in this case study is described here in appropriate detail.

Different phases of the process employ different levels of employee involvement from straightforward tasks without considerable interaction with the other partakers, such as filling a questionnaire, to active interaction with the other participants and the facilitators in the workshops. The execution of the procedure within the specific case network of this study is described in the following results section.

Results

Overview of the case study network

The lead organization of the network is a Nordic furniture manufacturer classified as a large company by the European standards. The European Union has defined medium sized enterprises as enterprises which employ fewer than 250 persons and whose annual turnover does not exceed 50 million euro. Small enterprises are defined as employing fewer than 50 people and whose annual turnover does not exceed 10 million euro (European Commission 2003). The organization is an established operator with a history of over 60 years. The company has gone through changing focuses

and in the business such as the growing importance of design instead of the mere utility of the furniture and later on varying predominant styles and influences from the cultural environment. The company has also undergone internationalization with a growing share of the markets focusing outside its native country. In addition to placing emphasis on design and ergonomics, the company determinedly pursues technical innovations. Recently, the growing demands and opportunities presented by technology on furniture have influenced many of the company's products. This increase in technology is seen to increase cooperation with suppliers and other partners with expertise that lies outside the core competences of the company.

The study included eight suppliers located in the Nordic and the Baltic countries. The suppliers supplied wooden and veneered components, aluminum profiles, sheet metal components, machined metal components and injection molded plastic components. A supplier providing technical design services was also included in the study. Some of the suppliers in the study had a long relationship with the lead organization with several decades of cooperation, while on the other extreme some relationships had been started very recently. The suppliers included in the study were selected based on having potential for deeper strategic partnership as perceived by the lead organization.

All the suppliers in the network were SMEs with 15 to about 100 employees and a turnover of less than 20 million euro. Table 1 gives an overview of the suppliers.

Table 1
Overview of the Suppliers

Supplier Number	Industry	Employees
1	Technical design	30
2	Injection molded components	100
3	Wooden and veneer components	70
4	Wooden and veneer components	100
5	Metallic components	30
6	Metallic components, coating	65
7	Sheet metal components	15
8	Aluminum profiles	15

The lead organization had not relied heavily on the suppliers as a source of innovation and had kept the core of the new product development within the company. This is mainly due to the design-intensive nature of the products. In many cases the design of the product dictates the form and materials quite comprehensively and when the suppliers are taken in the development the possibility to affect the design decisions is fairly limited. Nevertheless, all the studied suppliers had a role in developing new products, at the very least by making adjustments to optimize the components they provide.

Execution of the 3A Workshop Procedure

The execution of the 3A Workshop Procedure began with a questionnaire to the personnel selected to take part in the process. The participants within the lead organization represented a cross-functional take of the personnel associated in some manner with product development activities. These included personnel from design and development, marketing and sales, purchases, production and information systems. The participants were requested to list the three to five most significant problems encountered in their work related to product development activities including the networked activities along with the

perceived causes and effects related to the problems. The questionnaires thus provided subjective views of the causal relationships associated with the problems. The questionnaire results were then categorized and analyzed by the researchers/facilitators. The outcome of this work and the input to the first workshop was a Pareto chart of the main problem areas and Ishikawa Diagrams (cause and effect diagrams, fishbone diagrams) describing the causal relationships of the issues identified within each problem area.

In the first workshop, the Assessment Workshop, the results of the first analysis phase was validated by the participants, who were the lower-level employees of the lead organization. Following the validation, cross-functional teams updated the Ishikawa Diagrams by supplementing the causal relationships with the aim of identifying root causes for the causal chains. Here, the ultimate aim is to identify the depth in the causal chain, where an intervention could reasonably be implemented to change performance and prevent an undesirable outcome. In the second part of the workshop, the teams identified the most significant issues within their assigned problem area and produced preliminary plans for improvement actions following a provided template.

The resulting data was processed by the researchers and used as input for the second workshop, the Algorithm Workshop. The execution and content of the workshop was identical to the Assessment Workshop, but the participants were middle management, who possessed a higher-level view of the operations and the focus was therefore shifted from activities to processes. Again, the data was processed by the researchers.

After the first two workshops, interviews were conducted with the suppliers. Depending on the organization size, structure and the nature of the cooperation with the lead organization, one to five persons were interviewed per company with the interviews lasting 30-90 minutes each. The interviews

were semi-structured with a pre-written framework for issues to be discussed with the material produced by the first two workshops serving as background information. The interview data was handled anonymously in order to encourage the suppliers to discuss freely even on delicate issues. Also the semi-structured, conversational approach was selected to further an atmosphere of open discussion. Based on the interviews, Ishikawa diagrams were created of the problems and their causal relationships as perceived by the suppliers.

A second Algorithm Workshop was held with the focus placed on the issues related to the network operations bringing together participants from the supplier organizations and the lead organization. Due to some suppliers geographical distance not all the suppliers were able to send participants to the workshop, but the attendance was considered as sufficiently representative.

In the Task Force Workshop cross-functional experts representing different units of the lead organization made estimated quantifications to approximate the cost impacts of the issues identified in the preceding workshops. The identification of cost impacts were focused on the cost affecting the lead organization since the lead organization was out of necessity considered to be the driving force behind the changes to be implemented.

Based on the analysis of the previous phases, a number of improvement plans were further developed by a team with suitable understanding of the operations. The final workshop, Action Workshop was attended by the R&D management and product managers, whose support would be needed to ensure the successful execution of corrective actions. The improvement allocation decisions were made based on the outcome of the previous phases evaluated against company strategy and other development work under execution.

The most significant problems

This section describes the most relevant problems that arose during, and as a result of the study. The problems were judged in terms of their relevance as perceived by the personnel of both the lead organization and suppliers and their cost impact.

Lack of information in spite of established official information channels and practices. The lack of information was a common factor found behind the problems considered as most important. These problems included incomplete parts and products being released in to production and suppliers being unable to sufficiently plan their operations resulting in unnecessary rush and overtime. The production of incomplete parts and products was the most significant problem in terms of associated error costs, as well as from the perspective of both the personnel of the lead organization and the suppliers. Five of the eight suppliers mentioned this as one of the most important problems faced. Unnecessary hurry and overtime was regarded among the topmost problems by six suppliers. Other effects of inadequate flow of relevant information included miscellaneous tasks being left undone and significant amounts of time wasted on the unnecessary search of information.

The insufficient flow of information was not perceived to be a result of low amounts of official communication, but rather, due to the lack of inadequate direct contact with the appropriate people in other organizations as well as unclear responsibilities. Changes in personnel within the lead organization, as well as the fact that some suppliers are unable to attend meetings due to geographical distances, were also regarded as contributing factors, but the lack of personal contact was clearly emphasized as the most significant root-cause. Some of the suppliers also preferred to use their unofficial personal contacts as information channels instead of the officially established ones.

During the interviews the suppliers were also asked to reflect on how the issues discussed concerning their interaction with the specific lead organization of this study compare to the state of affairs with their other clients. The lack of information along with the causes leading to it, and its effects on performance were considered to be common issues with the majority of clients.

Suppliers are not involved early enough in the NPD process. The majority of the suppliers perceived that their involvement earlier in the NPD process would have brought notable advantages and resulted in both cost and time savings for both the supplier and the lead organization. The lead organization, however, was not as convinced that a favorable outcome would have resulted from earlier supplier involvement. This was due to previous discouraging experiences with some suppliers and a perception that all of the suppliers did not have the necessary R&D capability. That is, following the definition of Clark (1989) the suppliers were viewed to have only component knowledge and not sufficient architectural knowledge. A supplier that has component knowledge is capable of designing and manufacturing their specific component, but lacks the understanding and expertise, referred to as architectural knowledge, that is required for the integration of their solution with others developed simultaneously by other suppliers and the lead organization. The supplier's willingness to assume more responsibility of NPD was to be expected, since increasing their strategic importance with the lead organizations would suggest more business in the future. After the completion of the study, the lead organization was willing to undertake a pilot project where carefully selected suppliers, viewed as capable of taking on suitable R&D responsibilities, would be brought in to the NPD process in an earlier phase. This was not, however, included among the first of the improvement projects to be initiated.

Initiated improvement projects

As a result of the research/intervention, three improvement projects were initiated. One of these projects was directed explicitly to address the poor flow of information by clarifying the responsibilities of the relevant personnel. Another, which aimed to define the NPD process in a manner closer to practice and actual operational realities, also addressed the issue of information flows, though more indirectly.

Conclusions

The research findings conclude that efficient networked product development operations are highly dependent of well-functioning personal relationships between the large and small network actors. It was concluded that the digitalization of information processes does not provide the sought after advantages unless sufficient attention is paid to person-to-person interaction. Lack of personal and straightforward communication among the correct personnel was found to result in unofficial channels replacing the formal route in distribution of information, which in turn may lead to inconsistencies and inefficiency. The study also suggests that it would be beneficial for the lead organization to better take into consideration the situation and operating realities of the SMEs in the network.

The findings stressing the importance of personal communication are consistent with recent empirical studies (Wagner and Hoegl 2006, Hoegl and Wagner 2005), concluding that open, spontaneous, accurate and timely communication between team members across organizations is a key element characterizing the quality of buyer-supplier interaction. The general belief that a mere increase in communication quantity does not have uniformly positive effects, as concluded also in this case, is supported by (Hoegl and Wagner 2005), whose findings conclude that communication frequency and

intensity have been found to have a curvilinear (inverted U-shaped) relationship with project development budget and product costs. The conclusions regarding personal communication and also the importance of involving the employees in the change process also support other recent research (for example Wynstra, van Weele and Weggemann 2001) that attributes a large amount of the unfulfilled potential of supplier involvement to lack of communication and trust, and also to internal resistance within the network operators.

From the company perspective, the project was able to pinpoint and resolve some of the most significant problems. The participative approach was also capable of bringing forth some of the major root causes behind several of the continuous problems within the companies. The feedback received from both the lead organization and suppliers, regarding the approach and the process, was positive and highlighted an increased understanding of the overall picture of the network operations.

From the University point of view, the participative research approach was found to encourage the employees of both the lead organization and supplier SMEs to actively take part in the process, and thus enhance the efficiency of the data collection. According to our observations, the utilization of such methods also contributes to high data quality, as the people participating in the process have a strong motivation to provide accurate information, and are able to explicate previously latent knowledge. Observations regarding the efficiency of University-Industry cooperation utilizing the participative research approach described in this paper based on a wider selection of cases are described in (Hämäläinen and Laakso 2009).

References

- Barnir, Anat, and Ken A. Smith (2002). "Interfirm Alliances in the Small Business: The Role of Social Networks," *Journal of Small Business Management* 40(3), 219–232.
- Beer, Michael, and Russell A. Eisenstat (2000). "The Silent Killers of Strategy Implementation and Learning," *Sloan Management Review*, 41(4), 29-40.
- Beer, Michael, Russell. A. Eisenstat, and Bert Spector (1990). "Why Change Programs Don't Produce Change," *Harvard Business Review*, 68(6), 158-166.
- Beer, Michael, and Nitin Nohria (2000). "Cracking the Code of Change," *Harvard Business Review*, 78(3), 133-141.
- Black Sandra E., and Lisa M. Lynch. (2001). "How to Compete: The Impact of Workplace Practices and Information Technology on Productivity," *The Review of Economics and Statistics*, 83(3) 434–445.
- Clark, Kim B. (1989). "Project scope and project performance: The effect of parts strategy and supplier involvement on product development," *Management Science* 35(10), 1247–1263.
- Coch, Lester, and John R.P. French (1948). Overcoming resistance to change, *Human Relations* 1(4), 512–532.
- Corswant, Fredrik von and Claes Tunälrv (2002). "Coordinating Customers and Proactive Suppliers: A Case Study of Supplier Collaboration in Product Development," *Journal of Engineering and Technology Management*, 19(3-4), 249,261.
- Eccles, Robert G. (1983). "Control with fairness in transfer pricing," *Harvard Business Review* 61(6), 149–161.
- Godard, John and John T. Delaney (2000). "Reflections on the "High Performance" Paradigm's Implications for Industrial Relations as a Field," *Industrial and Labor Relations Review*, 53(3), 482-502.
- Granovetter, Mark (1985). "Economic Action and Social Structure: The Problem of Embeddedness," *The American Journal of Sociology* 91(3), 481–510.
- Hamel, Gary (2006). "The Why, What and How of Management Innovation," *Harvard Business Review*, 84(2), 72-84.
- Hoegl, Martin, and Wagner, Stephan M. (2005). "Buyer-Supplier Collaboration in Product Development Projects," *Journal of Management* 31(4), 530-548.
- Hämäläinen, Matti M. and Miko Laakso (2009). "Participative, Employee-Driven Method for Knowledge- Harvesting in University-Industry Collaboration – A Case Example from Finnish Industry," *Proceedings of INTED2009 Conference*, ISBN 978-84-612-7578-6, Valencia, Spain: International Association of Technology, Education and Development, 120-126.
- Ichniowski, Casey, Kathryn Shaw. and Giovanna Prennushi (1997). "The Effects of Human Resource Management Practices on Productivity: A Study of Steel Finishing Lines," *The American Economic Review* 87(3), 291-313.
- Järvinen, Pekka, Karlos, Artto A., and Panu Aalto (2000). "Explorations on the Integration of Fractured Process Improvement: The 3A-Workshop Procedure," *Project Management*, 6(1), 77–83.
- Järvinen, Pekka, Paul Lillrank, and Teemu Malmi. (2000). "Identification and Quantification of Poor Quality through the 3A-Workshop Procedure," *Proceedings of the 3rd International Conference on Building People and Organizational Excellence*. Aarhus: The Aarhus School of Business.
- Kahn, Kenneth B. (editor) (2005). *The PDMA Handbook of New Product Development, 2nd Edition*, Hoboken (N.J.): John Wiley & Sons Inc.

- Kennedy, Michael N. (2003). *Product Development for the Lean Enterprise: Why Toyota's System is Four Times More Productive and How You Can Implement It*, Richmond, Virginia, USA: The Oaklea Press.
- Mintzberg, Henry and Frances Westley (1992). "Cycles of Organizational Change," *Strategic Management Journal*, 13 Special Issue: Fundamental Themes in Strategy Process Research, 39-59.
- O'Brien, Rita C. (1995). "Employee involvement in performance improvement: A consideration of tacit knowledge, commitment and trust," *Employee Relations*, 17(3), 110-120.
- Park, Daewoo and Hema A. Krishnan (2001). "Supplier Selection Practices among Small Firms in the United States: Testing Three Models," *Journal of Small Business Management* 39(3), 259-271.
- Pasmore, William A. and Mary R. Fagans (1992). "Participation, Individual Development, and Organizational Change: A Review and Synthesis," *Journal of Management*, 18(2), 375-397.
- Piderit, Sandy K. (2000). "Rethinking Resistance and Recognizing Ambivalence: A Multidimensional View of Attitudes toward an Organizational Change," *The Academy of Management Review*, 25(4), 783-794.
- Premaratne, S. P. (2001). "Networks, Resources, and Small Business Growth: The Experience in Sri Lanka," *Journal of Small Business Management* 39(4), 363-371
- Reichers, Arnon E., John P. Wanous and James T. Austin (1997). "Understanding and managing cynicism about organizational change," *Academy of Management Executive*, 11(1), 48-59.
- Schein, Edgar H. (1995). "Process Consultation, Action Research and Clinical Inquiry: Are they the Same?," *Journal of Managerial Psychology*, 10(6), 14-19.
- Szamosi, Leslie T. and Linda Duxbury (2002). "Development of a measure to assess organizational change," *Journal of Organizational Change*, 15(2), 184-201.
- Taylor, Frederick W. (1911). *The Principles of Scientific Management*, New York: Harper and Brothers, Reprinted in 1998 by Dover Publications, New York
- Tyler, Tom R. (1987), "Conditions leading to value expressive effects in judgments of procedural justice: A test of four models," *Journal of Personality and Social Psychology*, 52, 333-344.
- Wagner, Stephan. M. and Martin Hoegl (2006). "Involving suppliers in product development: Insights from R&D directors and project managers," *Industrial Marketing Management* 35(8), 936-943.
- Wynstra, Finn, Arjan van Weele and Mathieu Weggemann (2001). "Managing Supplier Involvement in Product Development: Three Critical Issues," *European Management Journal* 19(2), 157-167.
- Yin, Robert K. (2003). *Case Study Research: Design and Methods*, 3rd ed. Thousand Oaks: Sage Publications.

NOT GETTING INVOLVED: ROLE OF HEIRS IN FAMILY BUSINESSES

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Successful inter-generational ownership transition is a key determinant of family business survival (Stavrou, 1999). Owner(s) close or sell family entities when heirs are absent or unwilling to lead. Over 70 percent of family businesses fail to reach second generation while only 10 percent survive till third generation (Aronoff, 1999). Extant research on this issue has focused mostly on business owners (Seymour, 1993) with little attention to heirs (Griffeth et al, 2006).

As intention is the best predictor of action (Ajzen and Fishbein, 1980), understanding heir's intention to quit family entity will provide critical insight into family business survival. Research on family heirs has focused their commitment to family entity, motivation, heir-owner relationship, personal factors and other market factors (e.g. Sharma & Irving, 2005). In family studies, research suggests that parents play a significant role in child's development and mental make-up (Sandra & McCartney, 1983). Building on previous research, here we develop and test a model of heir's intention to quit family business. We establish founder's commitment, family values, market opportunity, and job importance as the antecedents of heir's intention to quit family business. In addition, we argue that heir's commitment to family business moderates previous relationships.

Track: 14. Other SME Related Issues

The Paradigm Development of Thai Family Business Succession in Gold Ornament Industry

by Santi Suwannakan

The objective of this research was to study the significant factors of the paradigm development of Thai family business succession in gold ornament industry. The researcher used mix research approach, qualitative and quantitative methods. The dominant research design was largely qualitative. The qualitative approach led to the review of related literature, data collection and analysis through an inductive process from an in-depth interview of 15 key informants and a focus group discussion of 36 respondents while the quantitative approach led to a conclusion and support the qualitative research from 265 questionnaire surveys. The researcher used descriptive analysis and statistics used were mean and standard deviation to compare with research's concepts, theories and the experience of experts and advisor. This research showed the significant factors were achieving its objectives and concerning people especially heirs, their education and experience, management ability, family culture and entrepreneurship spirit which developed as PEACE paradigm.

Introduction

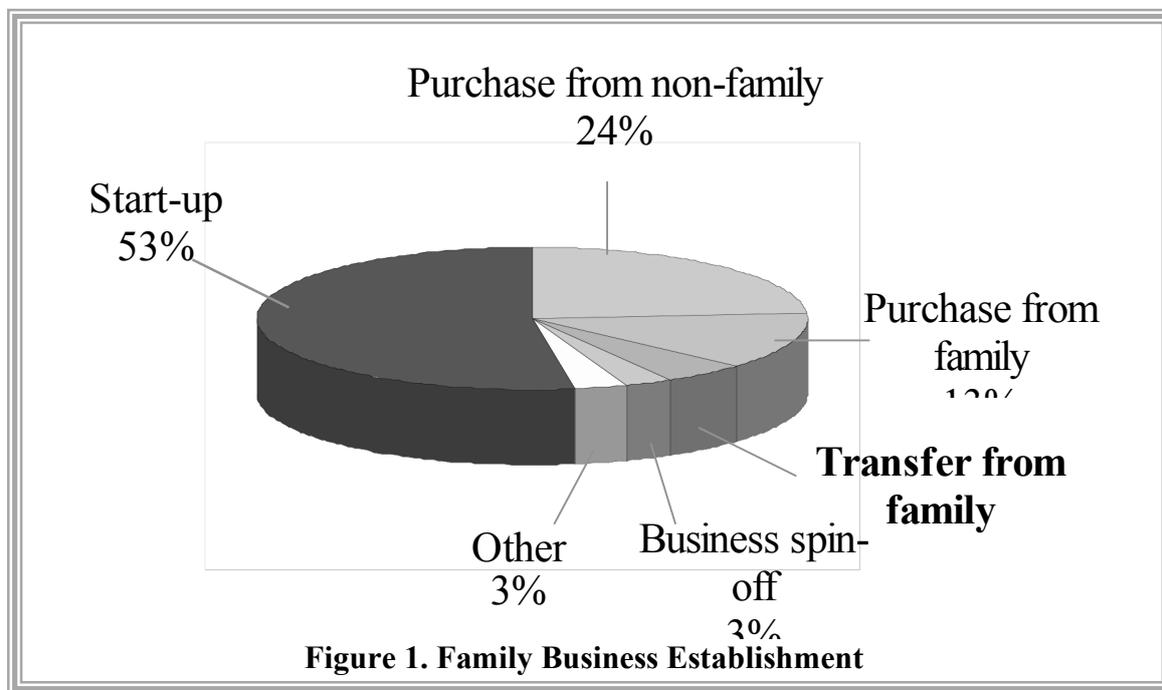
The definition of “family business”, Ward (2005), is “a business in which family members involved as owners or shareholders and such business was succeeded from generation to generation with management and control. The family evolution is an indicator for business complication and business growth. The role and responsibility are different from non-family business. In addition, the owner of family business concentrates on control and decision making in order to run business with strategic advantage and flexible management.”

The family business passing over from the business founder to the next generation has depended on both scientific factors of business management system, leadership and relationship management, and family members participating in the business while art factors are family bringing up and selection of successor in order to operate the business efficiently and in sustainable.

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Lank (2003) found that the proportion of family business succession transfer in many worldwide countries was quite low. On the other hand, many family businesses were still not successful in the operation, succession planning, and business succession from generation to generation. Only four percent of business was transfer from family (Bruce and Picard 2005).



Source: Bruce and Picard (2005)

Thai family business is a business unit represented in Thailand economic as a “source of power” which is important to the economy of the country. According to the research data, eighty percent of Thai businesses are controlled by entrepreneurs in the family business which played an enormous role in production and employment (Santiwongse, 2003). Meanwhile, approximately sixty five to ninety percent of the global family businesses are also all significant to the economy of every country (Sharma, Chrisman and Chua, 2001). However, Thai family businesses have many limitations and obstacles which are important factors for business establishment, operation and succession.

Generally Thai businesses have started and originated from “Family Business”. Even the giant billion business, the management is still in the style of family business. Nowadays, the significant obstacle of Thai business is a gap of managing concepts from generation to generation. Sometimes, the successor has focused on working with other organization. The succession strategy is lacked of handing over led to the long-term weakness in Thai family business, although working with family business creates higher profit and more return than working with other organizations. In

addition, family business growth rate is rather higher than that of others. Meanwhile, most of Thai gold ornament industry owners are family members and relatives who conveyed technique, knowledge, production skill, and distribution method for business succession. In the past, the production would be made by order and no distribution in general as present. Subsequently, the style of family business was developed and the distribution was grown into several branches. The gold ornament business then spread out countrywide and created jobs and entrepreneurs more than five thousand family businesses (Management Scripture, 2004).

The researcher often heard about the myth that most of Thai family businesses may not survive after the third generation successor who can fully manage and own the family business. Only thirty percent of family businesses can transfer their businesses to the second generation, while only ten percent can be succeeded to the third generation (Ward, 1987). Sharma, Chrisman, and Chua (2003) found that the failure in family business succession is a lack of theoretical and practical planning. Since literature on Thai Family Business is somewhat limited. There still is no general theory of succession or succession planning in the family business. The researcher therefore interested in studying Thai family business succession, especially in Thai gold ornament industry in order to develop the paradigm of Thai family business succession.

Literature Review

Family business is a unique business with many elements different from other non-family business, such as continuity purpose, business and family relationship, business value, family culture, quick decision making, flexibility, and succession. These family business owners are all significant mechanism in piloting the growth of global economy, including creating employment, expanding output, and bringing new products and services to the market. The family business therefore is the most important character in all economic systems because it was a center of centralized power of each group of people who would decide to use resources and factors for producing goods and services from grocery stores to multinational company (Siamwala, 2006: Witelersak, 2006).

Kohlrieser (2005) studied the impacts of family and business life cycles divided by time and proportion of business success in each generation that was succeeded the family business (see Figure 2), starting from the founder to the 2nd generation son who had involved in and taken over the business management. Meanwhile, the family was brought up and the 3rd generation grandson was come into the business, and this process will be repeated in the 4th generation and so on. When the time for generational transition arises, the founder and successors have to plan the leadership succession, conflict management techniques, understanding between the younger generation and the senior generation, sharing power and responsibility in order to reduce such conflict.

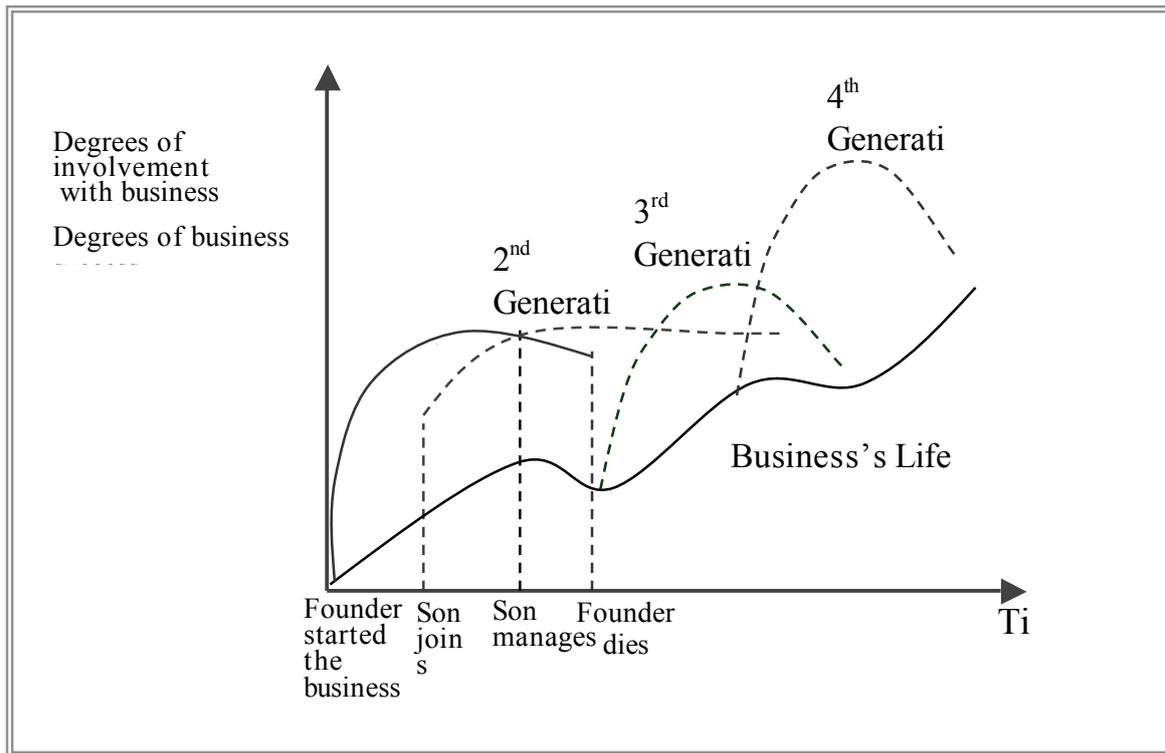


Figure 2. Family and Business Life Cycles

Source: Ward (2005)

Peter Davis, the director of Applied Research Center of Wharton Business School, Philadelphia, expressed that factors involve the family business advantage and good performance were as follows (Teerawanich, 2003).

1. Having humanity in workplace – The family business can focus on, take care of , and pay attention to stakeholders more than other business.

2. Focusing on long-term business operation – The family business always has a long-term target more than other business which the management often considers the performance on yearly basis.

3. Focusing on quality – The family business must maintain its reputation and respect of the family. Therefore, the family members must adhere to quality and value delivered to their customers.

Moreover, the reasons of the success in many businesses owned by the family and grown in the changed and complicated environment as at present are as follows:

1. The family business is not dominated by shareholders who wanted to guide the operational strategy.

2. The family members devoted short-term profit for the sake of long-term profit. The research result found that the family members can work more efficiently and effectively than other people.

3. The flexibility was a special character, causing the family business respond to challenges without limitations.

Sekarbumi (2001) studied the succession in family business in Indonesia since there is no study was conducted on its process in Indonesia and founded that the preparation of the succession process consists of several tasks such as timing to designate successor, setting criteria for a good successor, selection method and implementation process. The components of succession included business, family, entrepreneur, and family members. When preparing for readiness and going into appropriate period for introduction to formal succession process, the heir or successor, who had a chance to learn and to exercise, to obtain both external and internal experience, was certainly accepted and respected by every relevant party, including family, business, and third parties who involved in the family business, as well as, enable to be in a position of a new generation leader.

Lambrecht (2005) found an explanatory transfer model of family business to following generations. He expressed that transfer of family businesses was a lifelong, continuous process, in which the family must address and foster the soft elements of the transfer process: entrepreneurship, freedom, values, outside experience, upbringing, and education. The family business therefore should have a succession plan as follows:

1. To create a tool for business surviving of the family – The family members having intention, attempt, devotion, and ability to manage family business were deemed as one step of success that most of business founders dreamed of and desired to make it happen in their business. Thus, the business succession planning was an essential tool which can guarantee the founder the success of family business.

2. To prepare for readiness of business successors – When the business founder determined interested and competent person, do not keep that decision as confidential. This selection should announce to people in business and family in order to widely acknowledge who the successor is.

Ward (2005) stated in *Unconventional Wisdom Counterintuitive Insights for Family Business Success* that either success or failure of business succession depended on the efficiency and completeness of succession planning which often led to the pressure against family, business, and family members. According to the research result of International Institute of Management Development (IMD, Switzerland), it pointed that business successors need to prove themselves for public acceptance on their ability of management and business strategy planning in order to achieve the business target. Meanwhile, the successors have developed their role as family members in parallel with family leader, and business owner.

The framework of family business contained 4 key elements which were.

1. Family
2. Ownership
3. Management
4. Individual

While the research information from several countries (Schwass, 2005) had confirmed that less than twenty five percent of family businesses, which had a clear business succession plan, affected the increased risk in the transfer of family business successor. The characteristics of and interaction among the four constituencies evolve over time. Individuals evolve through a series of lifelong changes. In family business, the successor tends to be applied for a considerably longer time period than in a widely held corporation. The reasons for this lie in the continuity of ownership and the collective memory of the family. Management and staff also tend to differentiate successors from the earlier generation. So the responsibilities, needs and interests of the successor can be summarized from the perspective of the professional life cycle of business successor's phases as follows:

1. The 'Do' Phase
2. The 'Lead to Do' Phase
3. The 'Let Do' Phase

According to the life cycle of business succession and 4 elements of family business, Schwass (2005) had determined the Successor's Phases Matrix which was a base of relation and understanding in family business management in order to efficiently and effectively achieve the target as desired by every relevant party.

Conceptual Framework

As depicted in Figure 3, the study of literature reviews and researches related the researcher had synthesized the framework of the paradigm development of family business succession as follows.

1. The researcher applied the family business model Ward (2005), consisting of family (F), ownership (O), management (M) and individual (I).
2. The researcher implemented with the Successor's Phases Matrix Schwass (2005), developed the success of a transition into practice.

Thus, the framework of the research regarding the Paradigm Development of Thai Family Business Succession in Gold Ornament Industry can be synthesized as the following figure.

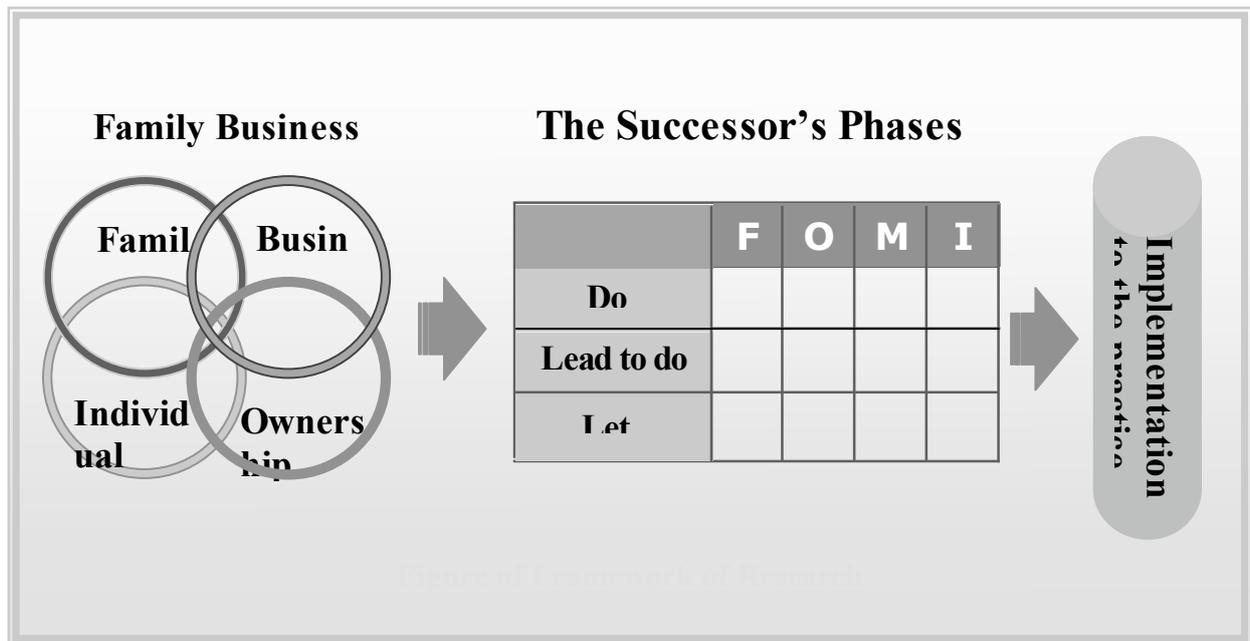


Figure 3. Conceptual Framework

Methodology

Data used in this research was collected under the supervision of Dr. Nattaphan Kecharananta, an associate professor of Business Management at Graduate School, Suan Dusit Rajabhat University, Bangkok, Thailand during July, 2006 to September, 2008. The key informants were Thai family business founders, owners, entrepreneurs, and successors in the gold ornament industry. First the qualitative research, using in-depth interview with 15 respondents, and a focus group discussion with 36 key informants from the member of Gold Trader Association were conducted to synthesize the family business succession. Then the quantitative method was conducted to support the research using simple random sampling, the researcher selected 265 business members from the 865 registered members. Of the 265 businesses selected, 14 businesses were branches under the same company. Of the 251 remaining businesses, eight were closed or unreachable and 33 businesses either declined to answer the questionnaire or ended the survey prematurely. Out of 210 businesses in the sample, 164 businesses answered the survey questions, which is a seventy eight percent response rate. The obtained data was compared with concepts, ideas, theories, and based on experience of specialists and advisors in order to confirm the reliability and validity of this research.

Research Result

The purpose of the present study was to explore the Thai family business succession in gold ornament industry. As the research result, the key respondents were mostly grown in the family that

successively engaged in gold trading. They had recognized the business development and the family's status since they were young. In addition, they were educated and cultivated family value, business treasure, ownership, entrepreneurship, professional learning and participation, practice of skillfulness and experience, and responsibility of business and family.

The relationship between family business model and succession matrix, the key respondents in Thai gold business had focused on the family: the education encouraging to their offspring, raising their children with good moral, honesty, diligence, patience, disseminating skill and knowledge by discussion and advice, cultivating business treasure, and incubating ownership and entrepreneurship spirit. Since childhood, they rose up their offspring with confidence, concept and idea to be accepted by the family's members and stakeholders. Finally, the leadership of responsibility for their family's members and business would be created.

The idea of becoming family's business successor and participating in the responsibility of business management, operation, and planning, the successor shall ensure his leadership. Including internal and external experience, the successor shall prove his leadership skill and ability to achieve the management target. Meanwhile, shall develop family membership, family leader, and business ownership at the same time.

The qualitative research result found the factors of family business succession, considering relationship between family business model and succession matrix, the key respondents had showed their succession paradigm which can be determined in six factors arranged orderly as follows: heir, education, experience, management ability, family culture, and entrepreneurship spirit.

The quantitative research using to support and confirm the result after testing on a five-point Likert scale, with five (5) being extremely important and one (1) being least important, entrepreneur members of Gold Traders Association of Thailand, rated their reputation for honesty as the most important success factor. "Liability and accountability" was ranked second among the elements necessary for building a successful family business as shown in Table 1. The researcher found that the respectfulness of the code of ethics in overall was in highest level. This was deemed as a factor significant to the successful family business operation. The heir was the most important factor for the family business in the business succession, while the preparation for family business succession in the business learning and education was in high level. In overall, the family culture on corporate relationship was in high level. The overview of the family business which was well managed and could be succeeded in sustainable way was in moderate level.

The summary of the paradigm development of Thai family business succession in the gold ornament industry was in high level, with its average of 3.87, and standard deviation of 0.48. When considered by each factor, found that the most agreed factor was that the successful family business operation should obtain important factors, followed by the heir who was an important factor to the

family business in the business responsibility and succession. The least agreed factor was that the well-managed family business which will succeed the sustainable business was considered in moderate level.

Table 1

Mean Score for Variable Factors Contributing to Family Business Success^a

Success Factors	Mean	Standard Deviation
1. Education and knowledge transfer	4.00	0.56
2. Personnel Ability	4.43	0.62
3. Reputation for honesty	4.74	0.59
4. Liability and accountability	4.70	0.64
5. Family involvement	4.28	0.68
6. Entrepreneur Spirit	4.32	0.68
7. External factor	4.33	0.65

Discussion

This research found that

1) The family business was different from general business. The family leader ran business, while the family members contributed and supported the business. The family business was continuity purpose, flexible, fast decision making, friendly, and trusted by the family members. The warm and harmonized family relationship which was consistent with the concept of Ward and his group (2005), indicating that the family business focused on the harmonious relationship with objectives of the business.

2) The success factors for family business succession included heirs, education, skill and experience, management ability, family culture and entrepreneurship spirit. These factors were the most important factors to the success of business operation. This was consistent with the idea of Carlock and Ward, (2001), stating that with the factors on bringing up and teaching the heirs, relationship of family and business, and experience accumulated throughout one's life, the general family members well understood the target and business approach followed by their family, when working in the family business. Additionally, the family members could discuss, consult, and talk about problems with close relationship in both formal and informal way.

^a 5 = extremely important, 4 = very important, 3 = mildly important, 2 = not very important, 1 = unimportant

3) The heirs were important to the family business in the part of their roles, responsibility, and business succession. When considering individual freedom and social value, the heirs had their liberty to select their occupation which they desired and which was suitable for their lifestyle. This idea was in consistence with the idea of Wangcharoen (2007), stating that “The important obstacle of the family business was a gap in managing idea from generation to generation. Many members of family business had focused on working with other organization. The business succession strategy was lacked of handing over, led to the long-term weakness of family business, although in fact working with family business can make higher profit and return than working with other organization. The growth rate for working with family business was rather higher than that of other organization. The family culture based on Thai – Chinese culture under the philosophy of diligence, honesty, reliable management, and sincerity. This oriental culture created the atmosphere for the family-owned business and entrepreneurship in Thailand.

4) Thai – Chinese culture is a foundation of family culture under the philosophy of diligence, honesty, and reliability by systematically transparent and equal management. The family members would help their group, relatives, families, and family business network. This idea was consistent with the idea of Santiwongse (2003), stating that organization leaders and family leaders shall depend on the business management principles, together with taking care of family smoothly. This principle was different from other types of business operation which was in line with the study of Handler (1989), saying that “The family business must develop business approach and setting priority of the business, specific form of value, belief, and how to operate the business under the concept focusing on shared value of people in the family business”. The study of Ibrahim, Soufani, and Lam (2003) indicated that the dual identity of family firms had concentrated on the interaction between family and business. The overlapping relationship between family and business was ownership and management.

5) The ability of heirs means interest, participation, and involvement in the family business, including practice and management. This concept was in line with the study of Woodall and Winstandley (2002). The family members’ intention, concentration, devotion, and ability of family business management were deemed as a step of success that every founder dreamed of and desired to have in their business.

6) The entrepreneurship spirit means an inner power of heirs which was created from good management skill, appropriate training, recognition, family business involvement, education, support of knowledge and experience. This was in line with the study of Carlock and Ward, (2001), stating that the family activity influenced the offspring to participate with business and family from their childhood created an advantage and benefit from the strength of family relationship.

Conclusion

From this research result, the researcher created the paradigm of Thai family business succession in gold ornament industry, as “PEACE” Paradigm, represented by the initial of the following:

P = People

E = Education & Experience

A = Ability

C = Culture

E = Entrepreneurship Spirit

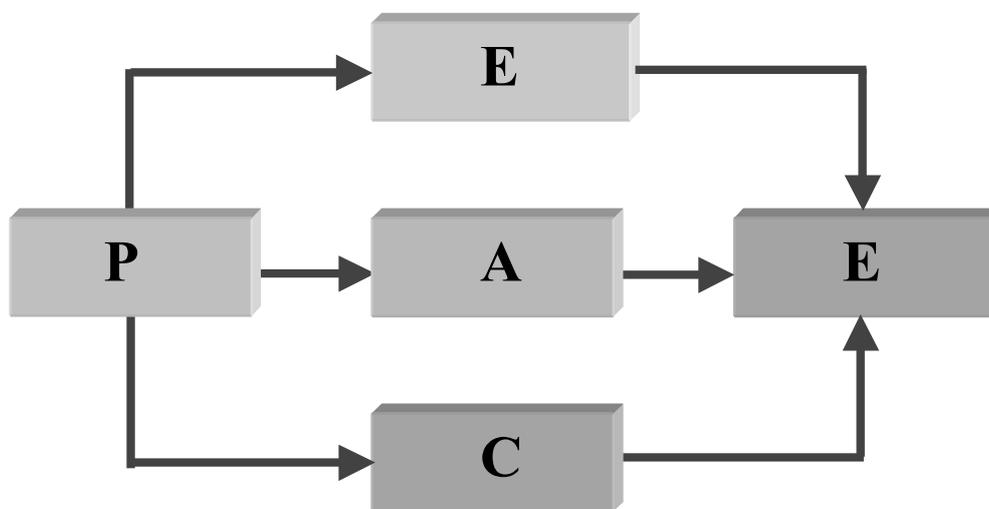


Figure 4. PEACE Paradigm

P : People refer to heir who was expected to be a family business successor. The successor should have the ability on undertaking business, and must be accepted by the family. If the successor lacks of ability to run business, he/she can not lead the business successfully. Finally, the business will be liquidated.

E : Education & Experience refer to education and experience on conveying knowledge, educating, and training. This was the most important factor for preparing the successor. The education must be planned and the heir must be trained since he/she was young, and the actual experience must be practiced in the family business. The heir needed to understand every step and technique of business operation.

A : Ability refers to management ability of heirs, interest, participation, and involvement in family business, including practice and management. The successor must be able to run the business with good management skills, family support, which is accepted and satisfy all parties.

C : Culture refers to family culture which is based on Thai – Chinese culture under the philosophy of diligence, honesty, reliable management, and sincerity. When these cultures involved in entrepreneurship, the family business atmosphere would be created. At present, the family business was adjusted into contemporary culture. However, it still remained the oriental cultural foundation which was diligence, honesty, and paying respect to each other. This culture can harmonize people in the family. The family members would help each other and spend their life guided by the family culture.

E : Entrepreneurship Spirit refers to an inner power of heirs which was created from good management skill, appropriate training, recognition, family business involvement, education, support of knowledge and experience, family and business history, from founder's establishment, overcoming obstacles, disappointing and success.

References

- Bruce, D., Picard, D. (2005). "Succession Can Breed Success," Canadian Federation of Independent Business, 1 – 13.
- Carlock, S. R., Ward, J. L. (2001). Strategic Planning for the Family Business. New York, N.Y. Palgrave Macmillan.
- Handler, W.C. (1989). Managing Succession in the Family Firm: The Next Generation Family Member's Experience. Babson College, Boston, MA.
- Ibrahim, A.B., Soufani, K., Lam J. (2003) "Family Business Training: A Canadian Perspective". Education + Training, 45, 474 – 482
- Kasikorn (2007). "Kaikorn and University of Thai Chamber of Commerce Push Family Business for Sustainability"
<<http://www.thaipr.net/nc/readnews.aspx?newsid=17EEDED24B4C6F38A0D971F1CF108356>>.
Accessed on Sep. 27, 2007.
- Kohlrieser, G. (2005). "Resolving Conflict in Family Businesses: Don't Be a Hostage to Family Harmony." in Unconventional Wisdom Counterintuitive Insights for Family Business Success. Ed. J. Ward. West Sussex, England. John Willey & Son. 117-145
- Lank, A. G. (2003). The Strengths and Weakness of Family Enterprises: A World Perspective. Business Families Centre, Sauder School of Business, University of British Columbia
- Lambrecht, J. (2005). "Multigenerational Transition in Family Businesses: A New Explanatory Model," Family Business Review, 18(4), 267-282
- Management Kampe. (2004). "Marketing Planning" Gold Journal. July 44 – 48.
- Santiwongse, T. (2003). "Business Transition to 3rd Generation" Family Business Strategy Bangkok. Prachomchang.

- Schwass, J. (2005). "Understanding the Successor's Challenges." in *Unconventional Wisdom Counterintuitive Insights for Family Business Success*. Ed. J. Ward. West Sussex, England. John Willey & Son. 77-95.
- Sekarbumi, A. (2001). "Succession in Family Business in Indonesia." Doctoral dissertation, the Maastricht School of Management, The Netherlands
- Sharma, P., Chrisman, J. J., Pablo, A. L., & Chua, J. H. (2001). "Determinants of initial satisfaction with the succession process in family firms: A conceptual model." *Entrepreneurship Theory and Practice*, 25(3), 17-35.
- Sharma, P., Chrisman, J. J., & Chua, J. H. (2003). "Succession Planning as Planned Behavior: Some Empirical Results," *Family Business Review*, 16(1), 1.
- Teerawanich, A. (2003). *Small Business Management*. Bangkok. Kasetsart University Press.
- Wailersak, N. (2006). *Business Group and Family Business in Thailand before and after the 1997 Crisis*. Bangkok BrandAgebooks
- Ward, J. L. (1987). *Keeping the family business healthy*. San Francisco, Calif.: Jossey Bass.
- Ward, J. L. (2004). *Perpetuating the Family Business*. New York, N.Y. Palgrave Macmillan.
- Ward, J. L. (2005). *Unconventional Wisdom Counterintuitive Insights for Family Business Success*. West Sussex, England. John Willey & Sons.
- Woodall, J. & Winstanley, D. (2002). *Management Development*. New Delhi: Maya Blackwell

Evaluation of Programs Designed to Enhance the Personnel Structure of SMEs in Korea

Hae-Chun Rhee*¹, Wooil Sim**²

<ABSTRACT>

For the last several years, the Korean government has been carrying out education/training programs to improve human resource structures in *SMEs*. This study evaluated these programs by applying the fuzzy set theory.

Policy evaluation requires an evaluation index that will serve as a basic standard for evaluation. However, the evaluation index is usually established through qualitative evaluation which includes linguistic expressions that are difficult to translate into an objective index. In this case, the subjectivity and inaccuracy of the evaluator is inevitably reflected in the evaluation index. The fuzzy set theory is a method that can systematically reflect the inaccuracies of the verbally proposed evaluation measure.

Analysis found that programs that were of longer duration and specific to fields of small sized companies, had more positive program performance. In the type of training program, the performance of workplace training program is the best effective, and the next programs are management and *CEO* training. The findings of this study suggest that the Fuzzy evaluation methods can suffice as an alternative method of policy evaluation.

Key words: human resource structure, policy evaluation, fuzzy set theory, evaluation index

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INTRODUCTION

For the past several years, the Korean government has been carrying out training programs (named Programs Designed to Enhance the Personnel Structure: *EPS* program) with the aim to boost the capacity of human resources in *SMEs*. The objectives of the programs are to strengthen the capability of existing manpower and induce competent workers to join *SMEs*. Approximately, 100 million dollars subsidies are supported every year, and 469 training courses are offered through 8 business associations. A total of 12,420 *SMEs* takes part in the programs with 31,296 employees enrolled.

It is difficult to evaluate the performances of the training programs that are supported by government subsidies as the goal is to enhance the productivity and human resource capability of the trainees. Qualitative assessment is often conducted to the training programs. However, there are several limitations to this approach. First, the Lickert scale in which the evaluations are described in words is employed for making qualitative assessments, but the ambiguity of words undermines the objectivity of numerical scores. The ambiguity associated with the linguistic variable must be reflected in the results. Second, the results may be distorted should the evaluators lack sufficient understanding of the program or of the assessment criteria. The difference in the confidence levels measured by each of the evaluators must also be factored into the results.

To address these issues regarding the composition of evaluation indicators and measurements, the fuzzy set theory may be employed to put together the indicators. The theory reveals a way to reflect and model the uncertainty and inaccuracy systematically in the decision making process.

Studies using the fuzzy set theory begin with the value assessment of non-market goods and the attributes analysis of market goods and expand into the methodology of inducing the judgment of experts in government policy or system change. Cases using the fuzzy theory in identifying the effect of policy change include Kooten, Krcmar and Bulte (2001) which identified the effect of a forest preservation policy amidst uncertainties and Moon and Lee (2005) which assessed expert opinion on the changes of science and technology policies of major countries around the world. Rhee and Lee and Lee (2007) used the fuzzy set theory to estimate the qualitative effect of the job creation policy in Korea, and Rhee, H.C.(2007) discussed the possibility of applying the fuzzy theory in the judgment of experts on policy effect.

In this short paper, fuzzy set theory was used to evaluate the *EPS* programs of *SMEs*. In order to assess the programs, we make the qualified indices for the process of project through the survey, and calculate the program score using the fuzzy methods.

METHODS

Framework for evaluation of EPS program

In the program evaluation, we decided three qualified criteria from the Delphi method. The criteria are effectiveness of the training program, training performance and feedback effect. The evaluation indicator of EPS program is consisted of several qualified indicators, these are *PEI* (Program effectiveness indicator), *TPI* (Training performance indicator) and *PFI* (Program feedback indicator). We considered these three indicators to assess the program and calculated the respective composite indices for each type of training programs. The types of training programs are technical fields training course, are technical theory training course, Management Training course and *CEO* training course.

When the evaluator executes the program evaluation, they may not select the linguistic expressions with a strong conviction using all available information. This raises the necessity of a way to reflect the ambiguity of the words and the uncertainty of the information at hand in the decision making process in a systematic manner.

Fuzzy set theory

The evaluators may not choose the linguistic variables with a strong conviction using all available information. This raises the necessity of a way to reflect the ambiguity of the linguistic expressions and the uncertainty of the information at hand in the decision making process in a systematic manner. The Fuzzy Set Theory gives the concrete grade points through a unique process that enables the evaluators to consider the uncertainty inherent in the linguistic variables.

Fuzzy set theory, invented by Zadeh (1965), is thought to be profitable to deal with uncertainty since it allows us to mesh a quantitative approach with the qualitative representation by extending classical Boolean logic to real numbers (Al-Najjar & Alsyouf, 2003). In Boolean logic, 1 represents truth and 0 falsity. On the other hand, all the fractions between zero and one are employed to indicate partial truth in fuzzy set theory. Hence, human judgments which are often vague and difficult to be estimated with an exact numerical value can be effectively expressed by fuzzy set theory in which there is no sharp boundary between sets of information.

Fuzzy Set Theory systematically addresses uncertainties or inaccuracy stemming from vagueness of language.³ To evaluate the *EPS* program, we presented three key issues related to analysis of evaluator judgement: one is, How should information of the linguistic rating be elicited from the evaluators, and two is, How should information of the importance of criteria be expressed from the

³ The Fuzzy Set Theory is applied to AHP (Analytic Hierarchy Process) (Saaty, 1994, 1996) or MAUT (Multi-Attribute Utility Theory) (Keeney, 1992) which uses the Lickert scale to induce accuracy of judgement. (Tsaour et. al., 2002)

evaluators, the other is, if several evaluators are to be consulted, how should their judgments on a given parameter be aggregated. The fuzzy set theory was designed to measure impact by the types of a training program through linguistic rating, importance of criteria and the confidence of judgement for each question (or indicator).

Fuzzy numbers. The fuzzy number is established.⁴ Triangular fuzzy number which is made up of three elements is given as $M = (a, b, c)$, the membership function $f_M(x)$ can be expressed as follows.

$$(3) f_M(x) = \begin{cases} \frac{x-a}{b-a}, & \text{for } a \leq x \leq b \\ \frac{x-c}{b-c}, & \text{for } b \leq x \leq c \\ 0, & \text{otherwise} \end{cases}$$

where, a and c stand for the lower and upper bounds of fuzzy number M , respectively, and x for the modal value.

Linguistic variables. A linguistic variable is consisted of words or sentences in a natural language. We suggested linguistic expressions such as ‘Very favorable’, ‘Favorable’, ‘Fair’, ‘Unfavorable’, ‘Very unfavorable’ for the linguistic rating score, and ‘Very important’, ‘Not important at all’ for the importance of criteria, and ‘Very sure’,..... ‘Very unsure’ for the confidence of his/her judgement. For arithmetic manipulation, each linguistic variable for the program score factor t was converted into triangular fuzzy number P , defined as the form of P_{ti} , and that for the importance of each criteria S , defined as S_{ti} , and that for the confidence of judgement V , as V_{ti} , by membership function, when evaluator $E = \{E_i \mid i=1,2,\dots,n\}$ for n evaluators and indicator set $C = \{C_t \mid t=1,2,\dots,k\}$ for k indicators of EPS program. The fuzzy numbers of each factor are expressed as follows.

$$(4) P_{ti} = (a_{ti}, b_{ti}, c_{ti}), S_{ti} = (o_{ti}, p_{ti}, q_{ti}), V_{ti} = (o_{ti}, p_{ti}, q_{ti})$$

If the evaluator is presented with five selectable linguistic values, the fuzzy number which consists of three elements can be sequentially corresponded as in <Table 1> for the values expressed in 1/4 intervals.⁵

⁴ Dubois and Prade (1978) defined the Fuzzy number and explained the meaning and characteristics of this number.

⁵ The Fuzzy number used by Moon and Kang (2001) was used here for convenience. If a different Fuzzy number was considered than that presented in this study, the results would be different. For instance, if (0.0, 10) was established as the Fuzzy number against the linguistic value of "does not

<Table 1> Triangle fuzzy number corresponding to each linguistic variable

Linguistic value	Fuzzy Number
1) Very unfavorable, Not important at all, Very unsure	(0.00, 0.00, 0.25)
2) Unfavorable, Not very important, Unsure	(0.00, 0.25, 0.50)
3) Fair	(0.25, 0.50, 0.75)
4) Favorable, Important, Sure	(0.50, 0.75, 1.00)
5) Very favorable, Very important, Very sure	(0.75, 1.00, 1.00)

Fuzzy confidence index and defuzzification. The fuzzy confidence index of each evaluator is calculated. The average method is used to calculate the fuzzy confidence index.⁶

$$(5) F_i \cong (Y_i, Q_i, Z_i),$$

$$\text{where, } Y_i = \frac{1}{k} \sum_{t=1}^k (a_{ti} \times d_{ti} \times o_{ti}), \quad Q_i = \frac{1}{k} \sum_{t=1}^k (b_{ti} \times e_{ti} \times p_{ti}), \quad Z_i = \frac{1}{k} \sum_{t=1}^k (c_{ti} \times g_{ti} \times q_{ti})$$

Total integral values of the fuzzy confidence index of each evaluator are calculated.⁷ The total integral values, $I(F_i)$ of the fuzzy confidence index (F_i) of evaluator i is as follows.

$$(6) I(F_i) = \frac{1}{2} [\alpha Z_i + Q_i + (1 - \alpha) Y_i]$$

where, α is called an index of optimism which represents the degree of optimism of a decision maker. That is commonly assumed to be $\alpha = 0.5$. It means that the evaluator is neutral in making the decision. To calculate the evaluation scores of each type of programs, the total integral value is normalized as in equation (7) and this is called the fuzzy evaluation score for i evaluator.

$$(7) G_i^F = \text{norm}(I(F_i))$$

Through this process, the average fuzzy evaluation score, composite indices of programs can be calculated as follows.

help at all," the result would have been different. See [Hsieh et. al \(2004\)](#) and [Lin and Hsieh \(2004\)](#) for details.

⁶ According to [Buckley \(1985\)](#), the mean value, median, the maximum and minimum value and a mixed value which mixes all of these together can be used to calculate the fuzzy confidence index.

⁷ The evaluation results expressed in the fuzzy confidence index and the fuzzy number must be ultimately converted into a crisp real number. The method of conversion can be mean of maximum, center of area, α -cut, and total integral value. Here, the total integral value was used. See [Liou and Wang \(1992\)](#) for further details.

$$(8) \quad G^F = \frac{1}{N} \sum_i G_i^F$$

SURVEY

EPS programs of *SMEs* are 4 types of training course, that is, work-field skill training course, theoretical knowledge training course, management training course and *CEO* training course. Looking in detail, More than 60 types of program courses have been operating, which are operated 9 industrial cooperatives. The number of trainee was 2,551 and that of company, 1,321 in year 2008. 400 trainees were surveyed, and Samples of the analysis was 396, and technical fields training course, 201, technical theory training course, 99, management training course, 33, and *CEO* training course, 63. Hierarchical combinations of composite index, indicators and sub indicators are as follows.

<Table 2> Composition of indices

	Indices	Sub indices
Composite index	PEI (Program effectiveness index)	Provide program information and opinion survey Workplace skills and expertise in training course Training Preparation and ability of director
	TPI (Training performance index)	Acquisition of professional knowledge and technology Acquisition of practical skills Contribution of technical innovation and labor productivity
	PFI (Program feedback index)	Rationality of the process of monitoring Necessity of training program continuing Possibility of program expansion

RESULTS

Composite index average of programs

Calculation method of indices is *SMS*, *FICS* and *FIS*. The *FICS* (Fuzzy importance & confidence weighting score) was calculated the linguistic rating score which is weighted the importance of criteria and confidence of judgement, applied the fuzzy calculation method. The *FIS* (Fuzzy Importance weighting score) was calculated the linguistic rating score which is weighed only the importance of criteria, fuzzy method. The *SMS* (Simple mean score) was only the mean of the linguistic rating score. The following table shows the various score average of all the programs.

<Table 3> Average score of all the programs

	Composite index of all the programs	Indices of all the programs		
		PEI	TPI	PFI
SMS	0.738	0.745	0.726	0.744
FIS	0.617	0.606	0.621	0.625
FICS	0.532	0.522	0.536	0.538

In view of all the programs, the program effectiveness score (0.745) and feedback effect scores (0.744) are nearly the same, followed by the training performance score (0.726) in the terms of *SMS*. However, In terms of *FIS* and *FICS*, the program feedback index (0.625 and 0.538) scored the highest followed by TPI (0.621 and 0.536) and PEI (0.606 and 0.522). The priorities of the attributes (or index and criteria) are difference when comparing the *SMS* and *FICS* (*FIS*) results. In other words the results differ when taking into consideration the ambiguity of the linguistic expressions and the uncertainty of human judgment.

Next, the *FICS* is likely to be lower than the *FIS*. It means that the evaluator has a lower confidence on his/her judgment.

Scores for each type of the training courses

The scores for each type of the training are as follows. The score ranking of composite index is *CEO* training (0.75) > work-field skill training (0.74) > theoretical knowledge training (0.73) > management training (0.72) in terms of *SMS*. In terms of *FIS*, the score rankings of composite index are work-field skill training (0.62) = *CEO* training (0.62), then theoretical knowledge training, management training (0.59). *FICS* ranking of composite index are work-field skill (0.54), technical knowledge (0.53) and *CEO* (0.53), and management (0.52).

The score of management training scored the lowest in *FICS* and *FIS*. In the three methods, the work-field skill course scored the highest.

<Table 4> Scores for each types of the training course

Calculation methods	Indices	Types of the training courses				
		average	theoretical knowledge	work-field skill	management	<i>CEO</i>
<i>SMS</i>	<i>composite</i>	0.74	0.73	0.74	0.72	0.75
	<i>PEI</i>	0.75	0.73	0.75	0.73	0.74
	<i>TPI</i>	0.73	0.72	0.72	0.70	0.74
	<i>PFI</i>	0.74	0.73	0.74	0.72	0.77
<i>FIS</i>	<i>composite</i>	0.62	0.61	0.62	0.59	0.62
	<i>PEI</i>	0.61	0.60	0.61	0.59	0.60
	<i>TPI</i>	0.62	0.63	0.62	0.59	0.62
	<i>PFI</i>	0.63	0.61	0.63	0.60	0.64
<i>FICS</i>	<i>composite</i>	0.53	0.53	0.54	0.51	0.53
	<i>PEI</i>	0.52	0.52	0.53	0.50	0.51
	<i>TPI</i>	0.54	0.55	0.54	0.51	0.53
	<i>PFI</i>	0.54	0.53	0.54	0.52	0.54

Relationship between *FICS* and characteristics of training

We attempted to the *OLS* analysis in order to find the characteristics of training course. The *OLS* estimate was drawn up with the *FICS* as the dependent variable and the characteristics of the training course such as training periods, number of trainees, government training subsidy, degrees of improvement for human resource technology as the independent variables.

<Table 5> Statistics of variables

Names of variable		Mean	Std.Dev.	Minimum	Maximum	NumCases
DAY	as training period (days)	10.7095	18.62	1	180	327
NUM	number of trainees (person)	83.8373	71.4948	1	224	338
PSUB	government training subsidy(Kwon)	490164	307051	28519	1.35E+06	338
ABL	improvement for technology (index)	3.16837	1.3001	1	7	392
FICS	Fuzzy importance & confidence weighting score	0.532054	0.08408	0.2409	0.6709	396

<Table 6> Estimation result

	Coefficient	t-ratio	P-value
DAY	0.35682	3.08349	0.00219
NUM	-0.30149	-2.26663	0.02396
PSUB	-0.00314	-3.68074	0.00027
ABL	1.79109	4.45245	0.00001
ONE	5441.2	56.76950	0.00000

The estimation results reveal that the evaluator gives higher scores when the training is longer, the number of participants is smaller, the government subsidies per trainee is smaller (or the individual burden is larger), and the capacity (or productivity) increase is greater.

This indicates that small-scale and long-term training courses are more effective. Furthermore, the deadweight loss effect of subsidies may occur, so that the ratio between government subsidies and individual cost-sharing may be well-balanced.

Confidence of evaluation

How the confidence of evaluation is relevant to score? We can suggest that the difference between *FICS* and *FIS* is the confidence of evaluator. If the degree of evaluator's confidence is complete, *FICS* is equal to *FIS*. If the degree of evaluator's confidence is less complete, *FICS* is less than *FIS*.

We have attempted to estimate the simple *OLS*. The difference between *FIS* and *FICS* is denoted as $dP = FIS - FICS$, and the mean of confidence is *Cm*. The result of estimation is as follows.

$$dP = 0.4266 ONE - 0.08039 Cm$$

$$(0.4545) \quad (-3.6358)$$

We may suggest that the difference between *FIS* and *FICS*, The *dP* is used to accept or not to accept for the evaluation result. That is, the more difference, the less acceptance for the result. So, we can define the level of evaluation confidence (*LCE*) as follows.

$$LCE = \frac{FICS}{FIS}, \quad 0 \leq LCE \leq 1$$

If the *LCE* is equal to 1, the confidence of evaluator is complete and the decision maker may be acceptable to the result of evaluation. However, the *LCE* is near to 0, we can know that the evaluator assesses the training program with weakly information or an ambiguous judgement. So, we may not be acceptable to the evaluation results. The *LCE* helps the policy maker decide whether to accommodate the results or conduct another round of evaluations.

CONCLUSION AND REMARKS

Policy evaluation requires an evaluation index that will serve as a basic standard for evaluation. However, the evaluation index is usually established through qualitative evaluation which includes linguistic expressions that are difficult to translate into an objective index. In this study, we try to set a method to solve the uncertainty problems for the evaluation of training programs using to fuzzy set theory.

According to evaluation results, In terms of the fuzzy score (FICS), the training program is that the effect of the program feedback (0.538) is the highest followed by training performance (0.536) and program effectiveness (0.522). In the types of programs, the score ranking of composite index, **FICS**, are work-field skill (0.54), technical knowledge course (0.53) and **CEO** training course (0.53), and management training course (0.52). Especially, in order to enhance the performance of the training programs, the small group and long-term intensive training program are effective. And, to prevent the deadweight loss of government policy, It needs to be appropriately adjusted the ratio of individual burden and government subsidies supported for trainees.

This study reveals that the evaluation indicators may impact the results of a qualitative evaluation for policy assessment. One is that the **fuzzy importance weighting score** infuses partial objectivity by translating the ambiguity of linguistic expression into numerical figures, the other is that **fuzzy importance & confidence weighting score** boosts the reliability of the results by adding the confidence of the evaluator to the **fuzzy importance weighting score** approach. These scores may be considered as alternatives to evaluating policy measures.

REFERENCES

- Rhee, H. C. (2007), "Fuzzy Set Theory and Evaluation", *Evaluation Review*, 6, Evaluation Research Institute, 152-165 (Korean Language).
- Rhee, H.C. & K.Y. Lee & I. J. Lee (2007). "Fuzzy Set Theory As a Method of Policy Evaluation: With a Case of Job Creation Policy", *KOREAN POLICY REVIEW*, 16(3), 67-92 (Korean Language).
- Al Najjar, B., & Alsyof, I. (2003). "Selecting the most efficient maintenance approach using fuzzy multiple criteria decision making", *International Journal of Production Economics*. 84: 85-100.

- Buckley, J.J. (1985). "Fuzzy hierarchical analysis", *Fuzzy Sets and Systems*. 17(3): 223-247.
- Dubois, D. & Prade, H. (1978). "Operations on Fuzzy Number", *International Journal of System Science*. 9(6): 613-626.
- Hsieh, T.-Y., Lu, S. T., & Tzeng, G.-H. (2004). "Fuzzy MCDM approach for planning and design tenders selection in public office buildings", *International Journal of Project Management*, 22: 573-584.
- Keeney, R. L. (1992). *Value-Focused Thinking: A Path to Creative Decision Making*: MA Cambridge: Harvard University Press.
- Lin, C. & Hsieh, P.-J. (2004). "A fuzzy decision support system for strategic portfolio. management." *Decision Support Systems* 38(3): 383-398.
- Liou, T. S., & Wang, M. J. J. (1992). "Ranking fuzzy numbers with integral value", *Fuzzy Sets and Systems*. 50: 247-255.
- Moon, H.-S., & Lee, J.-D.(2005). "A Fuzzy Set Theory Approach to National Composite S&T Indices." *Scientometrics*. 64(1): 67-83.
- Moon, J.-H., & Kang, C. S. (2001). "Application of fuzzy decision making method to the evaluation of spent fuel storage options", *Nuclear Energy*. 39(3): 345-351.
- Saaty, T.L. (1994). *Fundamentals of Decision Making and Priority Theory with the Analytical Hierarchy Process*, Pittsburgh: PA: RWS publication.
- _____. (1996). *Decision making with dependence and feedback : the analytic network process : the organization and prioritization of complexity*, Pittsburgh, PA: WS publication.
- Tsaur, S. H., Chang, T. Y., & Yen, C. H. (2002). "The evaluation of airline service quality by fuzzy MCDM", *Tourism Management*. 23.: 107-115.
- van Kooten, G Cornelis & Krcmar, Emina & Bulte, Erwin H (2001). "Preference Uncertainty in Non-Market Valuation: A Fuzzy Approach." *American Journal of Agricultural Economics*. 83(3): 487-500.
- Zadeh, L. A. (1965). "Fuzzy Sets", *Information and Control*. 8: 338-353.

Women Employees' Perception of the Effect of Individual Characteristics on Career Advancement

By Teresia Linge¹

This study was to investigate the individual characteristics women perceive to be important for them to progress into managerial positions in Kenya. The study was a cross-sectional survey carried out among women employees of the Federation of Kenya Employers (FKE) member organizations. Stratified and random sampling was used to select a sample of 400 women employees. Data were collected using a self administered questionnaire. Data was analysed using both quantitative and qualitative techniques. The analysis indicated that there were no significant differences in the individual characteristics between the women who received promotions and those who did not but there were differences in the characteristics of those whose earnings increased and those whose earnings did not increase. The study recommended that women employees should continue to invest in their education and training because it pays off and that affirmative action was required in Kenya to enhance the career advancement of women.

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Introduction

One of the millennium development goals is to promote gender equality and empower women. In line with development, women have continued to be empowered by receiving education and training and this has enabled them to get into the work place and hence start careers. According to Emerson (2005), women's increased participation in the workforce brings economic benefits to organizations thus enhancing women's leadership will generate greater positive impacts in the highly competitive global economy. Although women have access to professional openings, their role in management especially in Africa remains of little significance (Omar and Ogenyi 2004). This means that women have not been advancing enough in careers to form a critical mass and so they are misrepresented in decision making positions. The situation calls for effort to establish factors which can lead to career advancement of women if the gender equality is to be achieved in order to attain the millennium development goals in Kenya.

One of the factors which affects career advancement is individual characteristics. Individual characteristics are important because success in organizations is often gained through an individual's own achievement, such as a successful application for promotion (Wood and Lindorff 2001). Researchers indicate that individual characteristics play an important role in career advancement of women (Vinnicombe and Bank 2002). The definition of key individual characteristics are made based on views of the western world. However there is evidence of cross-cultural differences in career and

managerial advancement although not yet studied comprehensively (Garavan, O'brien and O'hanlon 2006). This observation implies that there is need to take into account views from of different national cultures when applying the western practices on career issues. This study is an effort to fill into the gap of career literature with regard to individual characteristics which are important for women's career advancement to managerial positions in Kenya. The research question was "Which are the individual characteristics that lead to career advancement of women to managerial positions in Kenya?"

Literature Review

According to Ackah and Heaton (2002), career advancement includes promotions and also how well any individual is doing in his or her career in terms of earnings. Several individual characteristics were found to be important for women's career advancement. These include: motivation, education and training, competency and confidence (McStravog 2006, Singh, Vinnicombe and Kumra 2006). According to Tharenou (1997) such individual traits were found to be important in facilitating individuals entering and advancing in management in hierarchical organizations. Schermerhorn, Hunt and Osborn (2003) say that individual motivation refers to the individual forces that account for direction level and persistence of a persons effort expended at work where direction means an individuals choice when presented with a number of possible alternatives. The authors say that the amount of effort one puts forth in doing something could be little or a lot and that persistence is the length of time one sticks to a given choice. With

regard to motivation, Tharenou (1997) states that individuals who advanced in their careers were ambitious, advancement and career motivated, capable of self monitoring, with high achievement needs and work participation, high levels of enthusiasm for to manage, intelligence and suited to the tasks of managerial jobs. According to Salami (2007) there is need to encourage women so that they can develop high achievement motivation and high self efficacy to overcome stereotyping at the work place and to be able to go into male dominated careers according to their interests and abilities. Van Vianen and Fisher (2002) state that an employees who wants to advance in career needs a strong motivation and interest in an upward career because ambition is necessary for one to be perceived as a potential manager.

White, Cox and Cooper (1994) say that individual motivation is important for any one to achieve or advance in his or her career. Their statement is based on the McClelland Motivation Theory which states that individuals with high achievement motivation have a tendency to attempt tasks which seem moderately difficult, persist in the face of difficulties and show evidence of good performance and achievement over time. Findings by other authors support this observation. For instance, Gray (1999) found that individual motivation is an important competency for seniority in organizations. Ismael and Arokiasamy (2007) state that an individual's motivation is a key determinant of his career advancement. Wood (2006) states that individuals who had advanced in their careers had high levels of motivation and achievement needs.

Employee interests are important for career planning because one is most likely to perform better in jobs that one is interested in (Dessler 2008). The author adds that interests are important for career planning because they determine the preferred occupation of the person. In this connection, Robbins and DeCenzo (2007) state that an employee ought to think of previous jobs held satisfaction what one liked most and least about the job.

Another important characteristic for career advancement is competency as mentioned before. Price (2004) defines competence as skills, knowledge and abilities possessed by people who work for organizations. Crobler, Warnich, Carrel, Elbert and Hatfield (2006) say that competencies are linked to exemplary performance by individuals or teams. Price (2004) states that competencies can be brought to an organization through recruitment of skilled people or developed within existing employees by investing in training, education and experiential programs.

Getting an opportunity for developmental training is important for career advancement because one main goal of training an employee is to ready them for their next position or make them promotable (Martinez 1997). Employees are also trained for other reasons like to improve their deficiency in skill or knowledgeable. An employee needs to improve on his or her knowledge through education to advance his or her career (Price, 2004). According to Sullivan (1998), educational credentials form a basis for career success. Hansen (2008) states that the worlds is increasingly dependent on education and training provided by colleges and universities and so the

knowledge is power equation is what can help women to crash the glass ceiling. Educational achievement is necessary for a managerial or professional career and making access to college and graduate school an important factor for career attainment (Wernick 1994). The basis for this is the Human Capital Theory which suggests individuals are rewarded in their current jobs for their past investment in education and training (Dessler 2008). Wood (2006) in her study found that 85 percent of managers perceived ongoing training as necessary to achieve promotion. Following this reasoning, Cox and Harquail (1991) argue that individuals with comparable education, training and experience would achieve similar levels of success.

Skill development is important for career advancement and it requires learning new things on ones job especially acquisition of skills to keep one up to date in his or her profession (Lee 2002). An employee should discuss the activities he or she most or least enjoys and the challenges faced with the supervisor so as to assess needs and goals in setting development goals (Martinez 1997). This is because supervisors are involved in nominating and selecting those to attend short courses or company specific programs (Wernick 1994).

Woods (2006) found that personal skills or competencies like communication skills, leadership skills, people skills and hard work were attributed to successful promotion to senior roles in organizations. Identifying personal skills involves discovering what one is good at and by so doing one is able to assess his employment skills (Zajas 1995). Employees need to discuss their personal skills with their supervisors to be able to come up with

career advancement objectives (Edmonstone and Watt 1995). To be able to accomplish that an employee needs to be able to identify strengths which carry potential relevant to a higher position, or weaknesses which affect the position (Baehr 1992). The weak areas ought to be targeted for skill development because career advancement emphasizes on skill development (Lee 2002). Zajas 1995) states that employees who developed a high level of competencies and professional skills were able to move up the ladder of success.

Kobia (2007) states that important characteristic for women in management include self confidence and assertiveness or personality required to overcome obstacles to reach the top. Personality is an all embracing and imprecise term that refers to the behaviour of individuals and the way it is organized and coordinated when they interact with the environment (Armstrong 2006). Research by Roberts (1997) in Armstrong (2006) found that personality is a predictor of work performance. A person's sense of self-esteem can lead to the to undertaking a range of responsibilities and to the spillover that he or she can effectively interact and handle different tasks (Nikandrou, Panayotopoulou and Apospori 2008). High self-esteem gives persons mental abilities that help them deal successfully with job-related issues and improve their work performance (Mossholder, Bedeian, and Armenakis 1981). Confidence is key to self esteem and putting oneself forward for promotion (Vinnicombe and Bank 2002). McStravog (2006) posits that individuals need to stick their necks out to go for promotion. In his study, the author found that many women

(46.6%) did not apply for promotion because they underestimated their ability. Fernandez (1993) suggests that there are few women who put themselves forward as candidates for higher level posts. According to Singh et al., (2002) women tend to understate their achievements and may have less confidence about their competencies when compared to men. Singh et al., (2002) say that the modesty nature in women results into their being more modest than men at the work place and women who are assertive and act in a confident manner are likely to be despised and evaluated negatively by colleagues especially other women because of being out of traditional role. Vinnicombe and Bank (2002) argue that lack of self confidence can lead to self-doubt, questioning one's competence and limiting one's career potential. The authors add that when women are confident they are more resilient in handling the barriers they face and they may go further by programming themselves not to see the barriers.

Research has shown that employees have attributions about their individual characteristics about past career progress and reasons for promotion, their expectations of and aspirations to obtaining management positions and promotions and why promotions may not be achieved (Wood and Lindorff 2001). As such, it may be interpreted that there may be differences in perceptions for promotion among women employees. Such perceptions could contribute to explaining one of the reasons why some women progress in their careers and why others do not progress. Many researchers have focused on the importance of individual characteristics for career advancement. Researchers in Kenya (Kobia 2007,

Majanja and Kiplagat 2003) focused on individual characteristics with regard to barriers to the progression of women managers. They have not focused on the individual characteristics which are important to success or advancement. This study seeks to establish what individual characteristics women perceive to be important for them to progress into managerial positions in Kenya.

Methodology

The study employed the cross-sectional survey research design where data was collected at one time. In this study a questionnaire was used to collect quantitative and qualitative data. Respondents had to give their opinions in relation to career advancement and individual characteristics. Career advancement the dependent variable was measured with two items: promotion received and increased earnings. The respondents were given using yes and no responses. The independent variable individual characteristics was measured using six items ranging from interest in being promoted to applying for promotions. The measures involved likert type of questions with responses ranging from 1 as strongly disagree to 5 strongly agree

The Sample

The study involved Federation of Kenya (FKE) member organizations. FKE has 34 member organizations which fall in 14 sectors. The population of study was the women employees whose population was 7,353. To cater for all the 14 sectors stratified sampling was applied. After that a sample size of 400 respondents was drawn using simple random sampling.

Results

With regard to promotion only 12 respondents representing 3.3 percent had received promotion as shown in table 1. The reasons they gave included hard work, possessing high qualifications and attaining a master's degree. Those who had not received

promotion 96.4 percent cited lack of fairness in the promotion exercise. In this connection they said that many bosses preferred the promotion of male employees over women. Other reasons included favouritism, and the companies' policy of recruiting senior staff externally

Table1: Have you received any promotion over the last three years?

		Frequency	Percent
Valid	Yes	12	3.3
	No	353	96.4
	Total	365	99.7
Missing	System	1	.3
Total		366	100.0

From the findings, 53 or 14.5 percent of the respondents had received bonus pay as shown in table 2. They attributed this to their investment in education and training. They said that they were included in additional paying activities in their organizations which enabled

them to earn more than before. Their superiors had noticed that those with higher education could be engaged in activities which had previously been performed by consultants like developing training programs, and departmental plans.

Table 2: Received bonus or merit pay over the last three years

		Frequency	Percent
Valid	Yes	53	14.5
	No	310	84.7
	Total	363	99.2
Missing	System	3	.8
Total		366	100.0

The results of the descriptive statistics are shown in Table 3. In the table typical scores are given. A high mean depicts a high level of the construct or aspect measured. The next 6 constructs constitute individual characteristics. The means for promotion and receiving bonus pay are low at 1.97 and 1.85 respectively. Ability to undertake managerial position had a high mean of 3.82 indicating that a large portion of the women employees were confident they could do the job. Women reasoned that that they were ready and confident to take managerial positions and the only reason why they were not in managerial position was because they had not been given the opportunity to serve those positions. Interest in promotion had a mean of 3.77 followed by performing job well due to competencies with 3.61. The women observed that they had the requisite

skills for entering to managerial positions and to perform just as well as other managers. Applying for higher positions had a mean of 3.47. Some women said they sometimes found it a waste of time to apply for positions which were earmarked for some special individuals. Investing in higher education had a mean of 3.20 while investing in training for managerial position had a mean of 3.12. Many of the women reasoned that they had been furthering their education by sponsoring themselves for evening degree programs. Those who had not yet invested in this area cited financial constraints as the hindrance. There were also those who could not get time off from their work place to attend classes. The women said that they attended managerial training and seminars to further equip themselves for higher positions.

Table 3: Descriptive Statistics

Construct	N	Minimum	Maximum	Mean	Std. Deviation
Interest in promotion	356	1	5	3.77	1.162
Perform due to my competencies	359	1	5	3.61	1.237
Invest in education to be promoted	359	1	5	3.20	1.148
Invest in training for managerial position	358	1	5	3.12	1.154
Ability to undertake responsibilities	357	1	5	3.82	1.261
Apply for higher positions	359	1	5	3.47	1.223
Valid N (listwise)	353				

The women reasoned that interest in promotion should not be displayed in an overly competitive manner because that could lead to a negative perception that one had become aggressive. The women said that behaviour could even lead to badmouthing and rejection by both fellow female and male employees. In the Kenyan culture women were expected to be resilient at the work place. There were those who reasoned that they did not apply for promotions because their organizations preferred to promote male employees to the higher positions. The women said that most managers were men and perceived men

as the ones with the right characteristics for promotion.

The results of bivariate correlations showed highest correlations between interest to be promoted and performance ability to undertake managerial position and also applying for higher positions. There is a high correlation between performance and ability to undertake managerial duties and also between investment in education and training, and ability to undertake managerial positions. The results are shown in table 4 below.

Table 4: Bivariate Correlation analysis: Pearson Correlations

	1	2	3	4	5	6
1. Interest in promotion	1					
2. Perform due to my competencies	.643(**)	1				
3. Invest in education to be promoted	.473(**)	.674(**)	1			
4. Invest in training for managerial position	.369(**)	.604(**)	.669(**)	1		
5. Ability to undertake managerial position	.560(**)	.771(**)	.723(**)	.668(**)	1	
6. Apply for higher positions	.554(**)	.488(**)	.495(**)	.479(**)	.568(**)	1
N	356	359	359	358	357	359

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

Mann-Witney test performed to test if there were differences in the individual characteristics between those who had received promotions and those who had not as shown in table 5 below. The output indicated that there was no difference between the individual

characteristics of the women who received promotion and those who had not. The women also said that those who were promoted had support from superiors or influential people. They added that it was not because they had higher qualifications than others.

Table 5: Individual Characteristics and Promotion (Mann-Whitney Test)

	Interest in Promotion	Perform exemplary due competencies	Invest in education to be promoted	Invest in training for managerial positions	undertake more responsibilities	Apply for higher positions
Mann-Whitney U	1996.000	2028.500	1942.500	1768.500	2062.000	2049.500
Wilcoxon W	2074.000	62059.500	61973.500	61453.500	61402.000	2127.500
Z	-.185	-.142	-.403	-.903	-.006	-.080
Asymp. Sig. (2-tailed)	.853	.887	.687	.366	.995	.936

Grouping Variable: Have you received any promotion over the last three years

The Mann-Whitney test revealed significant results of .004 on bonus pay and applying for higher positions, .021 between receiving bonus pay and investment in education, and .032 on bonus pay and investing in training for managerial positions. The findings show

that those women employees had received a bonus pay took the initiative to apply for higher positions. Similar observation also applied to investment in education and training for managerial positions. Table 6 illustrates these findings.

Table 6: Individual Characteristics and Bonus pay (Mann-Whitney Test)

	Interest in Promotion	Perform exemplary due competencies	Invest in education to be promoted	Invest in training for managerial positions	undertake more responsibilities	Apply for higher positions
Mann-Whitney U	6583.000	6878.000	6326.000	6391.500	6879.500	5936.000
Wilcoxon W	52639.000	53849.000	53297.000	53056.500	53239.500	52907.000
Z	-1.764	-1.424	-2.302	-2.146	-1.359	-2.902
Asymp. Sig. (2-tailed)	.078	.154	.021	.032	.174	.004

Grouping Variable: Have you received bonus or merit pay over the last three years

Discussions and Implications

The findings suggest that very few women received promotion to higher positions. Women are making very little progress to advance to decision making positions. This implies that the misrepresentation of women decision persists. All the same, women had made some progress on increase in earnings. The reasons they had cited included education and training. The observation concurs with what Price (2004) states that an employee can advance in career through education. Sullivan (1996) found that educational credentials form a basis for career success. The fact that the women were involved in additional activities which enabled them to earn more supports the human capital theory which suggests individuals are rewarded in their current jobs for their past investment in education and training (Dessler 2008). Women were making inroads to earn more after investing in their education and training. Their organizations could depend on them to perform tasks which required more knowledge and skills.

This is consistent with the findings of Hansen (2008) who states that the worlds is increasingly dependent on education and training provided by colleges and universities and so the knowledge is power equation is what can help women to crash the glass ceiling. Educational achievement is necessary for a managerial or professional career and making access to college and graduate school an important factor for career attainment (Wernick 1994).

The women reasoned that interest in promotion was important for career advancement because this focused them to be on the look out for promotion opportunities. Those whose earnings had increased said that they kept a keen interest on opportunities to serve in new projects in their organization this concurs with the findings of Ismael and Arokiasamy (2007).

Many women employees indicated that they had the ability to undertake managerial responsibilities. It is reasonable to conclude that they had self esteem. They were able to perform well due to competencies but one can also add that due to the self esteem. This resonates the findings of Mossholder,

Bedeian, and Armenakis 1981 that high self-esteem gives persons mental abilities that help them deal successfully with job-related issues and improve their work performance.

Applying for higher positions was shown as important for career advancement. Contrary to the findings McStarvog (2006) and Fernandez (1993) many women admitted showing interest and applying for managerial positions or higher positions. Indeed, most of those who had been promoted reported that they had applied for the positions. The women said that those who did not apply may appear not to be interested and so they made their applications to state their interest in the hope that could also mean that they be considered for promotion in future. From the findings, it is therefore reasonable to conclude that investment in education and training, performance were the most important individual characteristics which could lead to increased earnings and probably promotions for women employees in Kenya.

The findings clearly showed that women employees are prepared and interested to advance in their careers in Kenya. However the women employees were not getting equal treatment as the male employees when it came to promotions. Women were sidelined when it came to promotions and this explains the small number of women employees promoted. Women were making little progress and therefore needed more support from the government and institutions in order to progress. For the situation to be improved and women to be included in all levels of the organization, there is need to implement affirmative action. Also, women need to continue investing

in education and training in readiness for promotions and increased earnings.

References

- Nikandrou, I., L. Panayotopoulou, and E. Apospori (2008). "The Impact of Individual and Organizational Characteristics on Work-family Conflict and Career Outcome". *Journal of Managerial Psychology* Vol. 23 No. 5, pp. 576-598.
- Armstrong, M. (2006). *A Handbook of Human Resource Management Practice* (10th Ed.). Kogan Page. London and Philadelphia.
- Baehr, M. (1992). *Predicting Success in Higher Level Positions: A guide for Testing and Evaluation Potential*. Greenwood Publishing Group. USA.
- Cox, H., and C. Harquail (1991). "Career Paths and Career Success in the Early Stages of Male and Female MBAs". *Journal of Vocational Behavior*, Vol.64, pp 54-75.
- Dessler, G. (2008). *Human Resource Management*. Pearson Education, Inc., Upper Saddle River, New Jersey.
- Edmonstone, J. and S. Watt, (1995). "Career Management Support for Nurses." *Health Manpower Management*. Vol.21, No.5 pp17-20.
- Emerson, C. (2005). Progress toward a Canadian 'Centre' for

- Women in SETT (Science, Engineering, Trades and Technology). Proceedings of the 2006 WEPAN Conference.
- Management: Vol. 10 No.6 pp. 1046-1059.
- Hansen, K. (2008). 10 Powerful Career Strategies for Women. Quintessential Careers.
- Fernandez, M. (1993) “Women and Employment in Spain” in *European Women in Business and Management* . Eds. Davidson M and Cooper L.
- Majanja, M. and J. Kiplanga’t (2003). “Women Librarians in Kenya: A study of Their Status and Occupational Characteristics.” *Journal of Library Management* , Vol.24.No.1/2.
- Ismail, M. and L. Arokiasamy (2007). “ Exploring Mentoring as a Tool for Career Advancement of Academics in Private Higher education Institutions in Malaysia”. *The Journal of International Social Research*. Vol.1/1 Fall.
- Martinez, M. (1997) . “ Prepared for the Future”. *HR Magazine*, April
- Kobia, M. (2007). Coping Strategies of Women CEO’S in Kenya. OSSREA project.
- McStravog, D. (2006). Barriers to female progression to senior positions within the 26 district councils in Northern Ireland. www.womeninlocalcoincils.org.uk
- Lee, P. (2002). “Career Goals and Career Management Strategy among Information Technology Professionals.” *Career development International* 7/1 pp6-13.
- Mossholder, K., A. Bedeian, and A. Armenakis (1981), “Group Process-work outcome Relationships: a Note on the Moderating Impact of Self-esteem”, *Academy of Management Journal*, Vol. 25 No. 3, pp. 575-85.
- Garavan, T.N., F. O’Brien, and D. O’Hanlon, (2006). Career advancement of hotel managers since graduation: a comparative study. *Journal of Personnel Review*, Vol.35, No.3pp.252-280.
- Omar, O., and Ogenyi, V. (2004). “A Qualitative Evaluation of Women as Managers in the Nigerian Civil Service.” *The International Journal of Public Sector Management* Vol. 17 No. 4 360-373.
- Gray, L. (1999). “New Zealand HRD Practitioner Competence:” Application of the ASTD Competency Model. *The Journal of Human Resource*
- Price, A. (2004). *Human Resource Management in a Business Context*. Thomson Learning.

- Robbin, S., and D. DeCenzo (2007). *Supervision Today*. Pearson, Prentice Hall.
- Schermerhorn, J., J. Hunt, and Osborn (2003) *Organizational Behavior*. John Wiley and Sons.
- Singh, V., S. Vinnicombe, and S. Kumra (2006). "Women in Formal Corporate Networks: An Organizational Citizenship Perspective". *Women in Management Review*, Vol.21 N0.6 pp 458-482.
- Sullivan, J. (1998). The Business Impacts of not firing a bad employee/low performer. Human Resource Management College of Business, San Francisco State University.
- Tharenou, P. (1997). "Managerial Career Advancement." *International Review of Industrial and Organizational Psychology*, Vol.12 pp.39-93.
- Van Vienen, A., and A. Fisher (2002). "Illuminating the Glass Ceiling: The role of organizational culture preferences." *Journal of Occupational and Organizational Psychology*. Vol. 75, Issue 315-337.
- Vinnicombe, S., and J. Bank (2002). *Women with Attitude*. Lessons for Career Management . Routledge, New York.
- Wernick, D. (1994). Preparedness, Career Advancement, and the Glass Ceiling. United States Glass Ceiling Commission. http://digitalcommons.ilr.cornell.edu/key_workplace/128.
- White, B. C. Cox, and C. Cooper (1994). *Women's Career Development*. A study of High Flyers. Blackwell publishers.
- Wood, G. (2006). "Career Advancement in Australian Middle Managers: A Follow-up Study." *Journal Women in Management Review* Vol.21, No. 4 pp277-293.
- Wood,G and M. Lindorff, (2001). "Sex Differences in Explanations for Career Progress." *Journal Women in Management Review*.Vol.16 No.4
- Zajas, J. (1995). "Assessing your Executive and Personal Success." *Executive Development*, Vol. 8 No.3, 1995, pp.18 -22.

Financial Market Liberalisation and the Failures of Small and Medium Sized Enterprises in Nigeria: Is there any Link?

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Introduction

This paper presents part of the initial findings from a longitudinal study of the impact of economic liberalisation on small and medium sized enterprises (SMEs) development in Nigeria. In the specific instance, the impact of financial market liberalisation on the access to finance as well as the survival chances of manufacturing SMEs following the liberalisation of the financial market in 1992. The liberalisation process initially started with the adoption of structural adjustment programme (SAP). The adoption of SAP was as a result of the fall in revenue due to the glut in the international market for primary products which subsequently led to the fall in the price of primary products (Akinlo, 1996; Ajibefun and Daramola, 2003).

This resulted in decreased revenue earnings for the Nigerian government because of its dependence on primary products as the major foreign exchange source. The decrease in revenue resulted in the balance of payment crisis that exposed the deficiencies of the manufacturing sector to support the domestic needs of finished goods (Ikhide and Alawode, 2001; Olukoshi, 1996). This deficiencies/structural weakness in the manufacturing sector prompted the shift from the import substitution industrialisation (ISI) strategy adopted at independence in 1960 to export promotion industrialisation strategy. In this strategy, the private sector (SMEs) was proposed to play a critical role while the government acts as facilitator of economic activities (Ikpeze, et al, 2004).

To achieve this, the policy excised government of its powers/roles in the active participation of economic activities. This prompted the commercialisation and privatisation of all public parastatals, removal of subsidies on petroleum products and cuts in public service budgets to make more funds available to the government (Okome, 1999; Nwankwo and Richards, 2001; Ajibefun and Daramola, 2003). The commercialisation and privatisation exercise in addition to cuts in public service budgets translated to the reduction in the budgets for the provision and maintenance of public infrastructure (Lee and Anas, 1992; Adenikinju, 2005).

Further steps taken to restructure the economy to ensure efficiency as recommended by the IMF/World Bank in the reform policy were the liberalisation of trade and the financial markets. The liberalisation of trade was expected to ease the importation of raw materials to boost local production, remove bottlenecks in the importation of finished goods that would provide needed competition in the domestic goods market (Akinlo, 1996). The liberalisation of the financial market also saw the deregulation of interest rates, exchange rates and the removal of restriction on the registration of new financial institutions (Ikhide and Alawode, 2001). The reason was to allow for free entry of new financial institutions into the financial market that would engender competition and make it possible for the introduction of new financial products (Ebhodaghe, 1996; Siddiki, 2000; Obadan, 2006, Hübler, et al, 2008). Furthermore, it was expected to encourage the inflow of investible funds into Nigeria for greater SMEs access to formal sector funds which was not easily accessible prior to liberalisation (Akinlo and Odusola, 2003).

The Nigerian Economy and manufacturing SMEs

SMEs especially those in the manufacturing sector are regarded as the engine of economic growth in all economies of the world due to their undisputable contributions towards sustainable economic development through job creation and poverty alleviation (Udechukwu, 2003; Amin and Banerjee, 2007). SMEs utilizes local raw materials at the same time provide markets for raw materials to the industrial sector and serves as training ground for local entrepreneurs (Musa and Danjuma, 2007, Obokoh, 2008a). Due to the small size of SMEs, they are more flexible and easily adaptable to market/ environmental changes within a short period in their area of specialisation compared to large firms (Berry, 2002). The same small size advantage also constitutes obstacle to their accessibility to formal sector finance for their operations and expansion (Mambula, 2002; Madill et al, 2006).

This lack of access to formal sector finance tends to undermine their operations and affect their ability to contribute meaningfully to economic growth in recent times (Kyaruzi, 2006). Consequently, most governments in SSA especially Nigeria now recognises the need to provide enabling business environment that would make financial products accessible to SMEs through the liberalisation of financial market (Owualah and Obokoh, 2008). Still, how the policy measures have served and/or undermined SMEs, fiscal and monetary development, the general economic growth and development in Africa, Nigeria in particular is still heavily contested as a result of the mixed reports of the policy (Sachs and Warner, 1995; Rodríguez and Rodrik, 2000; Ikhide & Alawode, 2001; Noorbakhsh and Paloni, 2001; Prasad, et al, 2003; Stiglitz, et al, 2006). The mixed reports is based on the different methodologies applied in the determination of the impact of liberalisation on different economic variables (Rodríguez and Rodrik, 2000; Winters, 2004).

This then necessitates a re-visit and the need to take a critical and more nuanced look at how financial market liberalisation is affecting SMEs, for good or bad. The paper believes that, it is easier to gain a deeper and more robust insight into the dynamics of economic and market relationship from SMEs, and how this, in turn, implicates the Nigerian economy from below. A further reason why the impact of financial market

liberalisation on SMEs is of urgent interest is that it impinges, quite significantly, on the informal sector- a space where past and present public policies have not been clearly and sufficiently articulated in Nigeria and other countries in Sub-Saharan Africa.

In the light of these backgrounds, therefore, how might we understand the implications of the policy in Nigeria, and elsewhere across Africa using a different methodological approach? How has the implementation of the policy affected the survival of SMEs and the informal sector generally? If indeed financial market liberalisation policy portends adverse effects for SMEs, as witnessed, for instance, in their poor performances and high mortality rates in recent times? How is this, in turn, responsible for some of the challenges facing SMEs, especially in terms of securing funds for their reproductive basis?

To answer these questions, the study applied mixed methods of data collection and analysis that tapped on the strengths of both quantitative and qualitative methods, besides utilizing SPSS version 16, spread sheets and content analysis to analyse the data collected for the study. So the aim of this paper is partly to present the methodological approach followed in the determination of whether the financial market liberalisation in Nigeria has any link with the failures/ poor performances of manufacturing SMEs and the high mortality rates associated to SMEs after the implementation of the policy. The study was carried out in Lagos state of Nigeria because the state is the industrial hub of Nigeria with the highest concentration of SMEs and covers the period 1980 to 2006.

Review of related literature

The liberalisation policy in Nigeria is based on the McKinnon & Shaw (1973) theory that financial market liberalisation enables efficient allocation of scarce capital to the benefits of the rest of the economy if the government allow deposit rates of interest to be the competitive free-market rates. The deregulation of interest rate was aimed at making market forces determine the market rate of interest because it was postulated that markets function more efficiently without government intervention (McKinnon, 1973, Shaw, 1973). This was expected to improve the mobilisation of funds within the domestic informal sector and attract new investible funds from abroad due to the ensuring high interest rates of deregulation. The philosophy then was that, with the mobilisation of more funds from within and abroad, the saturation of the financial market with investible funds would eventually force interest rates down and make funds accessible to both local investors-SMEs and large businesses (Fry, 1988; Henry, 2003).

This has been argued in the literature as unworkable on the grounds that financial market is not like the goods market where excess supply over demand forces down prices (Stiglitz, 2000). The high interest rates will only attract speculative money from abroad and cause distress in businesses that would lead to economic crisis when the money that rushed into the country as a result of high interest rates rushes out of the economy with the slightest sign of crisis (van Wijnbergen, 1985; Stiglitz, 2004). And that government intervention is necessary because of the pervasive market failures in the financial market and the need to protect the market from particularistic interests (Stiglitz, 1998; Zhang, 2006).

Van Wijnbergen (1982) and Taylor (1983) noted that the increase in the total real supply of credit depends on higher deposit rates, the required reserve ratio and on whether the increased holdings of real money balances come mainly from direct lending in the curb market. And as the deposit rate of interest increases, there is the willingness and high propensity for people to deposit their money and these reduces demand for currency and curb market loans. If substitution of deposits for currency holdings is less important than substitution of deposits for curb market loans, then the total supply of working capital will fall and the curb market interest rate will rise. Taylor (1983) and Van Wijnbergen (1982) concluded that financial liberalization is likely to reduce the rate of economic growth by reducing the total real supply of credit available to business firms in real life situations.

Reports have it that certain countries, especially in Asia experienced higher savings and investments after the liberalization of the financial sector which encouraged high interest rates (Khatkhate, 1988), but other studies report failures for some economies that undertook financial liberalization (Larrain, 1989; Hellmann, Murdock and Stiglitz, 2000). Those countries in the later category suffered considerable macroeconomic instability, massive capital flight and widespread bank failures following financial liberalization (Hellmann et al, 2000; Ikhide and Alawode, 2001; Stiglitz, 2000, 2004).

Stiglitz and Weiss (1981) also observed that high interest rate increases the risk of lending to firms. According to Stiglitz (2002), in a country where many firms are highly leveraged, high interest rates do not only weaken the banking system and induce corporate distress; they reduce the ability and willingness of lenders/ financial institutions to lend. Mussa (2000) asserted that financial liberalization had significant adverse effects on less developed countries that were not adequately prepared for it. This is in terms of proper sequencing and setting up of economic structures upon which the policy can function effectively (Mailafia, 2006; Bello, 2007).

Some of the pre-conditions that were supposed to be met such as standard fiscal and monetary policies that should ensure low fiscal deficits and inflation rates; stable and competitive exchange rates with sufficient foreign exchange reserves; a solid financial system supported by effective regulatory and supervisory mechanism were not in place before the implementation of the policy (Obadan, 2006). In fact the Nigerian government methodology of the economic reform according to Ayadi and Hyman (2006) took a sudden approach because so many economic policy changes were undertaken within a short time. The pre-conditions were even not achievable at the time because Nigeria was experiencing adverse balance of payment crisis when she liberalised her capital account (Obokoh, 2008b).

Furthermore, to facilitate the liberalised trade and capital account convertibility, the government also deregulated the exchange rates to make the naira float according to the dictates of market forces (Akinlo, 1996; Schneider, 2000). The reason was to depreciate the 'over valued' naira to its appropriate value that would make imports more expensive. This was envisaged would encourage local production and consumption of made in

Nigeria products thereby stimulating cheap made in Nigeria exports due to the devalued naira (Ajibefun and Daramola, 2003).

In this regard, devaluation has been argued to be an inefficient policy tool to encourage exports due to globalisation of trade that has increased international trading markets (Reinhart, 1995). In addition, it was suggested that the import elasticity of demand for imported goods for the devaluing country must be greater than one for devaluation to be effective export stimulating instrument (Le and Tran, 1995; Akinlo, 1996; Pham and Nguyen, 1999). Apart from these, a nation's competitive advantage in the international business environment such as its resources and infrastructure (Porter, 1990) ought to be considered before applying devaluation as an export encouraging instrument.

In the case of Nigerian, it appeared that both the IMF/World Bank and the Nigerian government did not put into consideration the state of the industrial sector and its dependence on imported raw materials for production (Akinlo and Odusola, 2003). This is because after the adoption of the floating exchange rates, there was a general increase in price level which subsequently led to the fall in the purchasing power of Nigerians (Dawson, 1994; Ekpenyong, 2002). The poor purchasing power translated to reduced patronage of local manufacturers. Besides, the liberalisation policy precluded the government from the active participation in economic activities which necessitated the commercialisation and privatisation of public parastatals. This prompted the neglect of infrastructures such as electricity, supply of water and good roads which the government had hoped for private investors that never materialised (Lee and Anas, 1992). The lack of interest by private investors in addition to the cuts in budget for the maintenance of these infrastructures led to the deplorable state of infrastructure in Nigeria. The poor state of infrastructure then translated to the self-provision by manufacturing SMEs which in turn adversely affected their costs of operation (Lee and Anas, 1991; Adenikinju, 2005).

Methodology of the study

The study used mixed method of data collection and analysis that tapped on the strengths of both quantitative and qualitative approach that incorporated both quantitative (questionnaire survey) and qualitative (semi-structured interview) data (Morgan 1998; Creswell et al, 2003). The primary source of data represented sampled manufacturing SMEs' perspectives of the impact of financial liberalization policy on their businesses. The study then triangulated the primary data collected from both questionnaires and semi-structured interviews sources with the secondary data from the Central Bank of Nigeria (CBN). Statistical Packages for Social Science (SPSS) 16 and return on investment (ROI) model were used as the instruments of analysis.

The decision to apply mixed methods was driven by the research objectives which was informed by the identified research problems and the need to avoid the methodological problems of previous studies as observed by some scholars such as Rodriguez and Rodrik (2000); Agrawal (2004); Winters (2004) and Stiglitz (2000, 2002, 2004). Besides the economic liberalisation policy regarding interest rates, exchange and privatization that precludes the government from direct participation in the provision of infrastructures has

had a wide economic impact which makes it necessary to evaluate these economic variables empirically using micro level data from SMEs.

Questionnaires were the research instrument used for the collection of the quantitative primary data administered to 500 manufacturing SMEs, while the qualitative data instrument was the semi-structured interviews administered to 69 of the 100 SMEs that were purposively selected for the semi-structured interview (Ikhide and Yinusa, 1998; McEvoy and Richad, 2006; Ivankova et al, 2006). The secondary data was collected through statistical compilation of panel data from the CBN records and transaction data of the 69 respondents' SMEs to complete the mixed method.

Description of Data Collection Instrument

This section describes the data collection instruments, namely the questionnaires and the semi-structured interviews and the justification for the use of both instruments for the collection of data in this study.

Questionnaires

The questionnaire was divided into seven sections with each section dealing with each variable that was identified by this study as affecting the performance of manufacturing SMEs in Nigeria which the study sets out to explore. The questionnaire sought the following data from sampled firms: characteristics and profile of the firm; their source of finance before and after the implementation of the liberalization policy; their perception of state of infrastructure; the effects of exchange rate deregulation on their business; the effects of interest rates on their operation and if the deregulation of the interest rates helped to ease their accessibility to finance; their perception of the level of technological development in Nigeria and if the level of technological development in Nigeria affected their operation; and their perception of government support and how adequate are the government support to their operation in the liberalized environment of Nigeria.

The questions were followed by a range of options for which the firms had to tick the option that is most appropriate to them and if otherwise they were met to specify. Since it was not possible to get all the information using this method, the study also used a six point Likert scale to measure the perception of the sampled SMEs on certain issues. The likert scale was to ascertain the perception of the respondents' views on the effects of interest rates charged by the informal money lenders. The decision to employ a six point Likert scale was informed by the outcome of the pilot study. During the pilot study, almost all the participants either avoided or gave evasive answers to questions that bothered on the effects of the deregulated interest rates and the exchange rates on their business performance respectively.

Apart from these, most of the respondents were unwilling to give specific information on their business, but were happy to give information on general terms about the impact of the interest and exchange rate deregulation on business operation in general (De Vaus, 2002). They also did not want to paint a picture of failing business fortunes because they were skeptical about the information falling into the hands of their competitors. Furthermore, this method was also the only means of eliciting information on those

businesses that have gone out of operation within the manufacturing sector and the reasons for their failure at the time of carrying out the survey (Watson and Everett, 1999). It was not possible to locate the owners of those businesses that have gone out of business for their participation in the survey. This is because there is currently no data base of failed businesses in Nigeria where one could get the contact details of the owners of failed businesses. Attempts were made to get this information from the office of the Nigerian Association of Small and Medium Enterprises (NASME) located in Lagos, but we were told they do not have information on failed businesses.

For the purpose of clarity and ease of interpretation, the six point Likert scale of 'strongly agree', 'agree', 'neither agree nor disagree', 'disagree', 'strongly disagree' and 'not applicable' was collapsed into a three-point Likert scale of 'agree', 'disagree' and 'not applicable' by summing the responses that convey similar meaning together (De Vaus, 2002). The 'neither agree nor disagree' was grouped together with 'not applicable' because both options do not affect the outcome of the result as it assumes neutrality. The 'not applicable' option was included to cater for those respondents that have not started their business as at the time economic liberalisation was implemented and wanted to remain neutral or did not want to participate in a particular question in the questionnaire.

Justification for the use of Questionnaire Survey

The questionnaires made it possible to cover a large number of manufacturing SMEs and for the findings to be generalisable based on purposive random sampling of the 500 sample size which yielded a response rate of 430 with 369 valid responses. The questionnaires helped to maximize the possibility of the respondents answering the questions in similar manner and to achieve similar results due to the standardized questions. The questionnaires were pre-tested and found to be able to capture the poor performance of the manufacturing SMEs when the data from the pilot questionnaire survey were analysed.

Semi-Structured Interviews

The semi-structured interviews were used to obtain detailed and retrospective changes in the business environment over the last 12 years and how the liberalization policy has affected manufacturing SMEs in Nigeria. The semi-structured interviews also helped in collecting information that was not possible to collect with the questionnaires. The semi-structured interviews contained questions that solicited information about the sales/turnover, profits, operating costs and assets figures of respondents'. It was from this information that the ROIs for the various years were computed and used to carry out the comparison with the interest rates (cost of capital) from the CBN data.

The interview data for the study was restricted to 12 years because the 12 years period was the most accurate and up to date data that could be obtained from the 50 SMEs out of the 69 SMEs interviewed for this purpose. The initial plan was to obtain transaction data from 1980 to 2006 so as to enable comparison of the performance of respondents before and after economic liberalisation. Unfortunately, only 9 out of the 369 valid respondents were in existence before the liberalisation policy. Even some of the older SMEs did not

have accurate or up to date information beyond the 12 years cut-off mark chosen for the analysis. The non availability of data beyond 12 years from the participants was partly the reason for the 12 years cut off mark. A small number/percentage of those firms that were in existence before the liberalisation policy indirectly explains or gives a picture of the rate of survival/survival chances of manufacturing SMEs despite the policy reforms that were aimed at their development.

Justification for Using Semi-Structured Interviews

It was useful for the in-depth study of the transaction records of the 69 manufacturing SMEs that participated in this stage of the study because of the individual firms' information that were provided. It was useful in describing complex phenomenon of the inter-play of interest rates, exchange rates, the cost effects of the lack of infrastructure, competition from established manufacturers and SMEs chances of survival under a liberalized economy.

Pilot Study

Prior to the questionnaire survey and semi-structured interview, a pilot survey was conducted on 50 manufacturing SMEs operating in Ibadan, Oyo State of Nigeria in November 2006. All the firms filled out and returned their pilot questionnaires with a lot of blanks as some of the questions were not answered by the firms. The reason for undertaken the preliminary pilot survey was to validate and test whether the survey questionnaire designed for the study was properly constructed to capture the information needed to answer the research questions, and achieve the research objectives in view of the theoretical framework of the study. It was at the pilot stage that it was observed that most of the SMEs that participated were not comfortable giving out certain information such as sales, profit and cost figures which were vital for the attainment of the study's objectives.

This observation partly informed the amendments in terms of reframing; reducing the number of questions and the removal of some of the areas most SMEs were not comfortable with. As a result, the decision to use semi-structured interviews to support the questionnaire survey was arrived at. The semi-structured interview enabled us to specifically request information that could not be obtained through the questionnaires. It is pertinent to state that it was the information garnered from the pilot survey that laid the foundations for the development of the mixed method design for the data collection of this study.

Presentation of results

The data collected using mixed methods provided the information to support the holistic review of the impact of financial market liberalisation policy on manufacturing SMEs on the backdrop of the cut in public infrastructure budgets¹.

Analysis of the Aggregate of 50 manufacturing SMEs Return on Investment (ROI)

The aggregate of the ROI of the 50 manufacturing SMEs were used to holistically ascertain how the two independent variable (interest and inflation rates) impact on the

¹ For detailed presentation of the questionnaire results see Obokoh L.O (2008a).

ROI of the interviewed SMEs. The ROI is the measure of investment appraisal use to measure the performance of divisional managers in a decentralised organisation where each manager is accountable for investment and profits. Here each of the SMEs taken to be a division independent of each other with regard to investment decisions. The investment decisions were assumed to be made in the best interest of each division for the purpose of making profit and staying in business. The interest rate is very important in the use of ROI as a measure of performance because it is the investors reward for the use of their fund or the cost of capital (COC) pay to the investor for the use of their funds. This is determined by market forces in line with liberalisation with inflation rate floating freely according to market condition.

In computing ROI, the study did not adjust for the depreciation of the naira and inflation since it was using profit and asset figures to compute for ROI from the point of view of the SMEs who would have felt justified continuing in business since their ROI is above cost of capital (interest rate). It is also assumed that depreciation and inflation affected the value of asset and profit of the SMEs in the same way. Although Akinlo (1996) adjusted for depreciation and inflation in order to demonstrate that the high profits posted by manufacturing industries after the introduction of structural adjustment programme (SAP) in Nigeria, which later metamorphosed to liberalisation were due to inflationary effects.

Table 1: Aggregate Asset, Profits, Computed ROI of 50 Sampled SMEs, Interest Rates, Inflation Rates, Naira Exchange Rate to One US\$ and the Rate of Naira Depreciation to One US\$

Year	Asset in Naira (N'000)	Profit in Naira (N'000)	Return on Investment (ROI) (in %)	Interest Rate (COC)	(ROI)-(COC)= MOS (in %)	Inflation Rate	Naira Exchange Rate to One US\$	Rate of Naira Depreciation to One US\$
1994	Nil	Nil	Nil	21.00	Nil	57.00	21.87	(0.82)
1995	112292	20212.56	18.0	20.18	(2.18)	73.10	81.02	270.46
1996	168438	37056.36	22.0	19.74	2.26	29.10	81.25	0.28
1997	286345	71586.25	25.0	13.54	11.75	8.50	81.65	0.50
1998	314665	61359.68	19.5	18.29	1.21	10.00	83.81	2.65
1999	349628	82512.21	23.6	21.32	2.28	6.60	92.34	10.18
2000	371945	76620.67	20.6	17.98	2.62	6.90	100.8	9.16
2001	383449	71704.96	18.7	18.29	0.41	18.90	111.7	10.81
2002	473394	79056.80	16.7	20.48	(3.78)	12.90	126.26	13.03
2003	537948	123728.04	23.0	21.16	1.81	14.00	134.04	6.16
2004	645537	116196.66	18.0	19.47	(1.47)	19.40	134.73	0.52
2005	694755	154930.37	22.3	20.00	2.30	17.90	145.82	8.23
2006	771951	186040.19	24.1	18.70	5.40	12.60	148.46	1.81

Source: CBN Statistical Bulletin 2006 and computation from Semi-structured interview data

The computed ROI from the asset and profit of interviewed SMEs as shown in table responds negatively to interest rates and inflation. It shows that the higher the interest rate and the inflation rates, the lower the ROI and the lower the interest and inflation rates, the higher the ROI. This trend ironically obeys the law of demand which ordinarily a rational SMEs would have preferred a stable ROI. On the surface the aggregate ROI of the 50 SMEs looks encouraging because it still provide some positive margin of safety (MOS) from the market interest rate with the exception of 1995, 2002 and 2004 when the MOS

were negative. The margin of safety within the context of this study is the difference between ROI and interest rate and the level below which SMEs ROI must not fall below so as not to discourage owners of business from continuing in business.

Analysis of the Aggregate of 25 SMEs Partly Financed by Owners Funds and Retained Profit

This section analyses the group of 25 manufacturing SMEs that financed their operations using owners' funds and retained profits from their business over the years. It was gathered during the interview from the SMEs, that they had in the past secured loans from either the informal or formal sector as the report of the questionnaire also indicates, but have liquidated the loans because of the cost of servicing these loans. While some in this group said they tried but could not secure loans and were able to take advantage of suppliers' credit facilities which allows them some period of grace before paying for their raw material purchases without paying interest. Even when they were facing liquidity problems they were able to negotiate extension of payment dates to the suppliers for raw material purchases.

Table 2 Showing Aggregate Asset, Profits, Computed ROI of 25 Sampled SMEs*, Interest Rates, Inflation Rates, Naira Exchange Rate to One US\$ and the Rate of Naira Depreciation to One US\$

Year	Asset in Naira (N'000)	Profit in Naira (N'000)	Return on Investment (ROI) (in %)	Interest Rate (COB)	(ROI)-(COB) = MOS (in %)	Inflation Rate	Naira Exchange Rate to One US\$	Rate of Naira Depreciation to One US\$
1994	Nil	Nil	Nil	21.00	Nil	57.00	21.87	(0.82)
1995	67375.20	13475.04	20	20.18	(0.18)	73.10	81.02	270.46
1996	104431.60	24541.42	23.5	19.74	3.76	29.10	81.25	0.28
1997	183260.80	49480.42	27	13.54	13.46	8.50	81.65	0.50
1998	191945.70	40308.59	21	18.29	2.71	10.00	83.81	2.65
1999	216769.40	52024.65	24	21.32	2.68	6.60	92.34	10.18
2000	230605.90	49810.87	21.6	17.98	3.62	6.90	100.8	9.16
2001	239676.40	47935.29	20	18.29	1.71	18.90	111.7	10.81
2002	284036.40	51694.62	18.2	20.48	(2.28)	12.90	126.26	13.03
2003	344286.70	86071.68	25	21.16	3.84	14.00	134.04	6.16
2004	413143.70	86760.17	21	19.47	1.53	19.40	134.73	0.52
2005	437695.70	105047.00	24	20.00	4.00	17.90	145.82	8.23
2006	501768.20	130459.70	26	18.70	7.3	12.60	148.46	1.81

Source: CBN Statistical Bulletin 2006 and computation from interview data

*25 from the 50 SMEs that finance their operation from owners' funds and retained profits

The computed ROI of the 25 SMEs that financed their operations with owners' funds and retained profits, from their business was used to compare the ROI of the 50 SMEs. The slight difference is in 1995 when the ROI for the 25 SMEs showed a negative value with the 50 SMEs and also in 2002.

Analysis of the Aggregate of 25 SMEs Partly Financed by Owners Funds and Loans

The ROI for this group was also computed using the aggregate assets and aggregate profits posted for each year by the 25 manufacturing SMEs that their operations are partly financed by owners' funds and loans. The difference between the ROI and the interest

rates for each year gave the MOS. From the table, it was observed that except for 1997, 1999, 2000 and 2006 years of operation, the computed MOS for this group of SMEs were all negative. The worst years of the MOS were 1995, 2002 and 2004 when the interest rates ranged from 19.47% to 20.48%. Apart from inflation and the naira depreciation, the factor that affected these SMEs most is the interest rates. Since they were partly financed by loans or credit facilities which they had to pay interest on every month or annually as the case may be, the cost of operation increased by the financial cost or the cost of borrowing which is the interest rate on the loan facility. This was unlike the first group that were most affected by the inflation rate and depreciation of the naira. In other words, this group of SMEs that financed their operation with owners' funds and loans were worse hit by the deregulation of interest rates and the depreciation of the naira.

Table 3 Showing Aggregate Asset, Profits, Computed ROI of 25 Sampled SMEs*, Interest Rates, Inflation Rates, Naira Exchange Rate to One US\$ and the Rate of Naira Depreciation to One US\$

Year	Asset in Naira (N'000)	Profit in Naira (N'000)	Return on Investment (ROI) (in %)	Interest Rate (COB)	(ROI)-(COB)= MOS (in %)	Inflation Rate	Naira Exchange Rate to One US\$	Rate of Naira Depreciation to One US\$
1994	Nil	Nil	Nil	21.00	Nil	57.00	21.87	(0.82)
1995	44916.80	6737.52	15	20.18	(5.18)	73.10	81.02	270.46
1996	64006.44	12514.94	19.55	19.74	(0.74)	29.10	81.25	0.28
1997	103084.20	22105.83	21.44	13.54	7.90	8.50	81.65	0.50
1998	122719.40	21051.09	17.15	18.29	(1.14)	10.00	83.81	2.65
1999	132858.60	30487.56	22.95	21.32	1.63	6.60	92.34	10.18
2000	141339.10	26809.80	18.97	17.98	0.99	6.90	100.8	9.16
2001	153739.00	23769.67	15.46	18.29	(2.83)	18.90	111.7	10.81
2002	189357.60	27362.18	14.45	20.48	(6.03)	12.90	126.26	13.03
2003	193661.30	37656.36	19.44	21.16	(1.66)	14.00	134.04	6.16
2004	232393.30	29436.49	12.67	19.47	(6.80)	19.40	134.73	0.52
2005	257059.40	49883.41	19.41	20.00	(0.59)	17.90	145.82	8.23
2006	270182.90	55580.47	20.57	18.70	1.87	12.60	148.46	1.81

It was observed from the computed ROI of the 50 manufacturing SMEs and the ROIs computed when the 50 SMEs were split into two groups that the first 25 SMEs ROI does not give an impressive performance. For the fact that the 25 SMEs that financed their operation with owners' funds and retained profits show a better performance than the other group that their operations were partly financed by owners' funds and loans does not put them above market and environmental risk. The MOS as can be seen in table 2 are still too small to cater for dividend assuming these businesses were to pay dividends to shareholders.

Discussion of Results

The results of the analysis of this study revealed a lot of contradictions with the predictions of the theories behind financial market liberalisation in Nigeria and the envisaged policy outcomes. These contradictions include:

The interest rate deregulation negatively affected the performance of sampled SMEs. This was confirmed by the survey and operational costs of SMEs. A critical look at the interest rates differentials between Nigeria and the countries in the table 4 (see appendix

1) clearly shows that manufacturing SMEs in Nigeria stand no chance of competition with manufacturers from those countries. Their cost of finance is very low compared to that of SMEs in Nigeria. From the survey, the respondents that still had loan obligations stated they are finding it difficult to meet the interest payments.

The deregulation of exchange rates did not discourage the importation and consumption of imported finished goods in Nigeria instead it increased the cost of financing raw materials from both local and international sources. This also significantly affected SMEs performance and is linked to one of the reasons why some SMEs changed their business objectives from manufacturing to retail business. This is because most of the sampled SMEs stated that it was cheaper to import than to manufacture the same product in Nigeria.

The financial market liberalisation did not solve the problem of access to finance for SMEs despite the increase in the number of financial institutions. It was observed from the analysis that the number of SMEs that had access to formal finance decreased after the implementation of the liberalisation policy. In fact the high interest rates was the reason given for the lack of interest in seeking formal or informal finance for their operations as most of the participants in the semi-structured interviews believed that it was better to rely on their retained profits for their operations. This they claimed was a better means of cutting down their operational costs.

Some economic constraints such as lack of access to modern manufacturing equipment due to low level of technology in Nigeria, absence of infrastructure and special SMEs funds faced by SMEs before liberalisation still persists after the implementation of the policy. The problem of infrastructure was even more compounded with the cut in the budgets for the provision of public utilities by the government. This is evidenced by the present deplorable state of infrastructure in Nigeria. The deplorable state of infrastructure has also significantly affected SMEs costs and their competitiveness because they had to embark on self-provision of some of these infrastructures. Furthermore, 85% of sampled SMEs reported that they were yet to benefit from the promised government support for SMEs due to corruption and favouritism on the part of government officials in charge of the programmes.

Concluding Remarks

Base on the questionnaire survey and the semi-structured interviews results, this study concludes that financial market liberalisation policy that was meant to encourage the private sector hence manufacturing SMEs negatively impacted on their performance and survival in Nigeria. In other words, the policy partly contributed to the failures of most manufacturing SMEs in Nigeria contrary to the policy objective of improved SMEs opportunities and access to finance. Instead of the competitive free-market rates to attract funds for investment as postulated by McKinnon & Shaw (1973), it became an obstacle that partly hinders the survival of manufacturing SMEs. The result of the study is further strengthened by the current global financial crisis and the call for regulation of the financial markets by some financial analysts in line with Stiglitz (1994; 2004) market failure rationale for government intervention.

Implication: The efficient allocation of financial resources and proper functioning of the financial market cannot be complete without government intervention. For the policy to

have meaningful impact on private sector growth in Nigeria and other SSA countries, the government need to re-adjust and review the present policy of unregulated interest rates and floating exchange rates. In addition to taking appropriate steps in solving the infrastructure problems manufacturers faced by the increase in budgetary allocation to the maintenance and expansion of infrastructure in Nigeria.

References

- Adenikinju, A. (2005), "Analysis of the Cost of Infrastructure Failures in a Developing Economy: The case of the Electricity Sector in Nigeria", AERC Research Paper 148, African Economic Research Consortium, Nairobi.
- Adedipe, B. (2006), "Capital Account Liberalisation: What Options for Developing Countries?" Central Bank of Nigeria Economic and Financial Review, Vol.44, No.4, pp 63-87.
- Agrawal, P., (2004) "Interest Rates and Investment in East Asia: An Empirical Evaluation of Various Financial Liberalization Hypotheses", Journal of Development Studies, 40(3) 142 — 173.
- Ajibefun, I.A. and Daramola, A.G., (2003), "Efficiency of Microenterprises in Nigerian Economy", AERC Research Paper 134, African Economic Research Consortium, Nairobi.
- Akinlo, A.E. (1996), "The Impact of Adjustment Programme on Manufacturing Industries in Nigeria, 1986-1991: A Sample Study", African Development Review, 16, 73-93.
- Akinlo, A.E. and Odusola, A.F., (2003), "Assessing the Impact of Nigeria's Naira Depreciation on Output and Inflation", Applied Economics, 35 (6) 691-703.
- Amin, M.R. and Banerjee, S., (2007), "Constraints and Contingencies of the Small Business: A Comparative Perspective", *International Business & Economics Research Journal*, 6 (9) 59-66.
- Ayadi O. F. and Hyman L. (2006), "Financial Liberalization and Price Rigidity in the Nigerian Banking System", *Managerial Finance*, 32 (7) 557-568.
- Bello, W. (2007), "The Post-Washington Dissensus", *Foreign Policy in Focus*, available at www.fpif.org (visited 21/11/2007).
- Berry, A. (2002) "The Role of the Small and Medium Enterprise Sector in Latin America and Similar Developing Economies", *Seton Hall Journal of Diplomacy and International Relations*, 104-119.
- Creswell, J. W., Plano Clark, V. L., Gutmann, M. and Hanson, W. (2003), *Advanced Mixed Methods Research Designs*, In *Handbook On Mixed Methods In The Behavioral And Social Sciences*, eds. A. Tashakkori and C. Teddlie, 209–40. Thousand Oaks, CA: Sage.
- Dawson, J. (1994), "Responses to Adjustment - the Marginalization of Small Enterprises in Nigeria", *Small Enterprise Development*, 5 (2) 18-24.
- De Vaus, D. (2002), *Surveys in Social Research*, Fifth Edition Routledge, Taylor and Francis Group, London.
- Ebhodaghe, J.U. (1996), "Distress management and prevention strategies for the Nigerian banking system," *Nigeria Deposit Insurance Company Quarterly*.
- Ekpenyong, D.B. (2002), "Performance of Small Scale Enterprises in Nigeria during the Structural Adjustment Programme Implementation: Survey Findings", *Journal of Financial Management & Analysis*, 15 (1) 38-50.
- Fry, M.J. (1988), *Money, Interest, and Banking in Economic Development*, Baltimore, Johns Hopkins University Press.
- Hellmann, T.F., Murdock K.C., and Stiglitz, J.E., (2000), "Liberalization, Moral Hazard in Banking, and Prudential Regulation: Are Capital Requirements Enough?" *the American Economic Review*, 90 (1) 147-165.

- Henry, P. B. (2003). "Capital Account Liberalisation, the Cost of Capital and Economic Growth," *The American Economic Review*, 93(2) 91-96.
- Hübler, O., Menkhoff, L. and Suwanaporn, C. (2008), "Financial Liberalisation in Emerging Markets: How Does Bank Lending Change?" *The World Economy*, 393-415.
- Ikhide, S. I. and Alawode, A.A. (2001), "Financial Sector reforms, Macroeconomic Instability and the order of Economic Liberalisation: The Evidence from Nigeria," African Economic Research Consortium, Nairobi, Kenya, African Economic Research Consortium (AERC) Research Paper 112.
- Ikhide, S.I. and Yinusa, D.O. (1998), The Impact of Financial Liberalisation on the Finance of Small and Medium Scale Enterprises in Nigeria Research report 12, Development Policy Centre, Ibadan.
- Ikpeze, N.I. , Soludo, C.C. and Elekwa, N.N. (2004), The Political Economy of the Policy Process, Policy choice and Implementation, in Soludo, C.C., Ogbu, O. and Chang, H. (eds), *The Politics of Trade and Industrial Policy in Africa, Forced Consensus?*, African World Press, New Jersey and International Development Research Centre, Canada.
- Ivankova, N. V., Creswell, J. W. and Stick, S. L., (2006), "Using Mixed-Methods Sequential Explanatory Design: From Theory to Practice", *Field Methods*, 18 (1) 3–20.
- Khatkhate, D.R., (1988), "Assessing the impact of interest rates in less developed Countries", *World Development*, 16 (5) 577-588.
- Kyaruzi, I.S. (2006), *Business Incubation and Clustering in Tanzania: Local Economic Growth, Entrepreneurship and Business Support Policies*. PhD thesis submitted to the University of Birmingham, United Kingdom.
- Larrain, F. (1989), "Debt, Adjustment and Recovery: Latin America's Prospects for Growth and Development", Basil Blackwell, Oxford.
- Le, V. D. and Tran, T. H. (1995), "On Devaluation and the Possibility to Devalue the Currency of Our Country", *Journal of Economic Studies*, 3 (205) 11-29.
- Lee, K.S. and Anas, A. (1991), "Manufacturers' Responses to Infrastructure Deficiencies in Nigeria: Private Alternatives and Policy Options", In A. Chibber and S. Fischer, (eds.), *Economic Reform in Sub-Saharan Africa*, A World Bank Symposium.
- Lee, K.S., Anas A., (1992), "Costs of Deficient Infrastructure: The Case of Nigerian Manufacturing", *Urban Studies*, 29 (7) 1071-1092(22).
- Madill, J. J., Allan A. R, and George H. H., (2006), "Women Entrepreneurs: Debt Financing and Banking Relationship", *Journal of Small Business and Entrepreneurship*, 19 (2) 121-142.
- Mailafia, O. (2006), "Capital Account Liberalisation: Reflections on Theory and policy", *Central Bank of Nigeria Economic and Financial Review*, 44 (4) 11-29.
- Mambula, C. (2002), "Perceptions of SME Growth Constraints in Nigeria", *Journal of Small Business Management*, 40 (1) 58-65.
- McEvoy, P. and Richards, D. (2006), "A Critical Realist Rationale for using a Combination of Quantitative and Qualitative Methods", *Journal of Research in Nursing*, 11 (1) 66–78.

- Mckinnon, R.I., (1973), *Money and Capital in Economic Development*, Brookings Institution, Washington D.C.
- Morgan, D. (1998), "Practical Strategies for Combining Qualitative and Quantitative Methods: Applications to Health Research", *Qualitative Health Research*, 8, 362–76.
- Musa, Y.W. and Danjuma, D.M. (2007), "Small and medium scale enterprises: A veritable tool for sustainable job creation in Nigeria," *Journal of Business and Public Policy*, 1, 1-25.
- Mussa, M. (2000), *Factors Driving Global Economic Integration: Opportunities and Challenges*, Kansas City, Missouri.
- Noorbakhsh, F and Paloni, A. (2001), "Structural Adjustment and Growth in Sub-Saharan Africa: The Importance of Complying with Conditionality", *Economic Development and Cultural Change*, 49 (3) 479-509.
- Nwankwo, S. and Richards, D. (2001), "Privatization: the myth off free market orthodoxy in Sub-Saharan Africa", *International Journal of Public Sector Management*, 14 (2) 165-179.
- Obadan, M.I. (2006), "Globalization of Finance and the Challenge of National Financial Sector Development," *Journal of Asian Economics*, 17 (2) 316-332.
- Obokoh, L.O. (2008a), "Small and Medium Sized Enterprises Development under Trade Liberalisation: A Survey of Nigerian Experience" *International Journal of Business and Management*, 3 (12) 92-101.
- Obokoh, L.O. (2008b), "Capital Account Liberalisation: Survey of SMEs Experience in Nigeria", 31st Institute for Small Business and Entrepreneurship Conference, 5th-7th November, 2008, Belfast Northern Ireland.
- Okome, M.O. (1999), "State and civil society in Nigeria in the era of structural adjustment program", 1986-93, *West Africa Review*: 1, [iucode: <http://www.icaap.org/iucode?101.1.1.9>] Date of access 17/11/2005.
- Olukoshi, A. (1996), "Economic Crisis, Structural Adjustment and the Coping Strategies of Manufacturers in Kano, Nigeria", United Nations Research Institute for Social Development Discussion Paper 77.
- Owualah, S.I. and Obokoh, L.O. (2008), "Tackling Youth Restiveness in the Niger Delta Region of Nigeria through Entrepreneurship", *Journal of Enterprising Communities: People and Places in the Global Economy*, 2 (2) 168-179.
- Pham, C. Q. and Nguyen, V. C. (1999), "The Impact of Exchange Rate Changes on Balance of Payments in Vietnam Since 1989", *Journal of Economics Studies*, 12 (259) 3-21.
- Porter, M. (1990), *The Competitive Advantage of Nations*, the Free Press, A Division of Macmillian, Inc. New York, NY.
- Prasad, E., Rogoff, K., Wei, S., and Kose M. A. (2003), "Effects of Financial Globalization on Developing Countries: Some Empirical Evidence", Mimeograph, International Monetary Fund.
- Reinhart, C.M. (1995), "Devaluation, Relative Prices, and International Trade Evidence from Developing Countries", *International Monetary Fund*, 42, (2) 290-312.
- Rodríguez, F. and Rodrik, D. (2000), "Trade Policy and Economic Growth: A Sceptic's Guide to the Cross-National Evidence", CEPR Discussion Paper No. 2143. London, Centre for Economic Policy Research.

- Sachs, J. D and Warner, A. (1995), "Economic Reform and the Process of Global Integration", *Brookings Papers on Economic Activity*; No.1; ABI/INFORM Global pg. 1.
- Schneider, B. (2000), "Conference Report on Capital Account Liberalization: A Developing Country Perspective", Overseas Development Institute London, June 21, 2000.
- Shaw, E., (1973), Financial Deepening in Economic Development, New York: Oxford University Press.
- Siddiki, J. U. (2000), "Demand for Money in Bangladesh: a Co-integration Analysis", [Applied Economics](#), 32 (15) 1977-1984(8).
- Stiglitz, J. E., (1998), "More Instruments and Broader Goals: Moving towards the Post-Washington Consensus", United Nations University/ World Institute for Development Economics Research, Helsinki.
- Stiglitz, J.E, Ocampo, J. A., Spiegel, S., Ffrench-Davis, R., and Nayyar, D. (2006), *Stability with Growth: Macroeconomics, Liberalisation, and Development*. New York: Oxford University Press.
- Stiglitz, J.E. (2000), "Capital Market Liberalisation, Economic Growth, and Stability", *World Development*, 28 (6)1075-1086.
- Stiglitz, J.E. (2004), "Capital-Market Liberalisation, Globalisation, and the IMF", *Oxford Review of Economic Policy*, 20 (1) 57-71.
- Stiglitz, J.E., (2002), "Capital Market Liberalization and Exchange Rates Regimes: Risk without Reward", the Annals of the American Academy, AAPSS, 579, 219- 248.
- Stiglitz, J.E., and Weiss, A. (1981), "Credit Rationing in Markets with Imperfect Information", *The American Economic Review*, 71 (3) 393-410.
- Taylor, L. (1983), Structuralist Macroeconomics: Applicable Models for the Third World, New York, Basic Books.
- Van Wijnbergen, S. (1982), "Stagflationary Effects of Monetary Stabilization Policies: A Quantitative Analysis of South Korea", *Journal of Development Economics*, 10 (2)133-69.
- Van Wijnbergen, S. (1985), "Macro-economic effects of changes in bank interest rates: Simulation results for South Korea," *Journal of Development Economics*, 18, (2-3) 541-554.
- Watson, J. and Everett, J. (1999), "Small Business Failure Rates: Choice of Definition and Industry Effects", *International Small Business Journal*, 17 (2) 31-48.
- Winters, L. A. (2004), "Trade Liberalisation and Economic Performance: An Overview," *Economic Journal*, 114, F4-F21.
- Zhang, X. (2006), "Financial Market Governance in Developing Countries: Getting Political Underpinnings Right", *Journal of Developing Societies*, 22 (2) 169-196.

Appendix 1: Table 4 Interest Rate Differentials (%)

Year	Nigeria	Europe	USA	Japan	United Kingdom
2000	17.98	4.9	6.4	0.5	5.9
2001	18.29	3.2	2.4	0.1	4.1
2002	20.48	2.2	1.6	0.0	4.1
2003	21.16	2.2	1.3	0.0	4.4
2004	19.47	2.2	2.9	0.0	4.9
2005	20.00	2.7	4.8	0.1	4.7
2006	18.70	3.7	5.4	0.5	5.3

Source: Extracted from Adedipe (2006) and CBN various issue

Public Policies for Academic Entrepreneurs in Comparative Perspectives (United States and Germany)

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With my contribution, I will discuss how academic entrepreneurs are supported by public policies in the United States and Germany to better understand a) why academic entrepreneurs get involved into the commercialization of innovation and knowledge and b) whether public policies have supported the endeavours of innovative academics to commercialize a patent. I assess the role and impact of policies conducive to academic entrepreneurs since the mid-1980s in Germany and the U.S. and present initial findings from a cross-regional survey among academic entrepreneurs who registered a patent as university employees in Germany, in 2005.

Track: 3. Entrepreneurship and Public Policy

The reality of management development in small New Zealand firms: Implications for public policy

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Abstract

In New Zealand few firms demonstrate high growth, or high performance and it has been suggested that a lack of management capability on the part of the owner-manager is partly to blame. This study was commissioned by the New Zealand government with the aim of gaining a better understanding of how SME owner-managers develop capability and engage in management development (MD). In-depth interviews were undertaken with 25 owner-managers. Most interviewees regarded MD as a key factor in firm success and attributed the acquisition of managerial knowledge and skills primarily to incidental learning processes rather than structured and formal learning and development activities. These findings have implications for policy makers and those who work with the owner-managers of small firms and are timely given the current economic situation, where previous patterns of growth are increasingly being challenged – and new ways of approaching development need to be found.

Introduction

Despite the New Zealand government's explicit focus on growth over the last few years (Ministry of Economic Development, 2003; Science & Innovation Advisory Council, 2002), not all firm managers have taken up the challenge to grow, and as a consequence, few New Zealand firms can be described as 'high growth' (defined as those that increase their turnover by more than 20 percent per annum for 5 consecutive years). This is seen as hugely problematic in the context of a small economy such as New Zealand, where the small domestic market and the country's geographic distance from large centres of population means that growth through exporting is a key focus of the government agencies that are charged with economic development.

Over recent times the focus of these agencies has been on identifying the drivers of (and barriers to) growth, and there has been an increasing willingness to understand that the tangible manifestation of growth in the way described above is the consequence of a number of factors – including the growth orientation of the owner manager. While some research has been done into this specific aspect of growth (UMR, 2004), there has been more interest in the notion of 'management capability' and how to improve it – given that the discussions surrounding this notion are predicated on the assumption that New Zealand managers lack capability (Knuckey et al., 2002).

This assumption (that New Zealand managers – particularly the owner-managers of SMEs – lack capability) was the rationale behind the establishment of the Business Capability Partnership (BCP), an organisation made up of government and non-government agencies with a broad interest in the topic. The specific task of the BCP was to establish a range of initiatives that would directly or indirectly develop the capability of New Zealand managers. One of these initiatives was to commission research on the topic of management capability.

The study described in this paper was commissioned by the BCP (through the government's lead agency – the Ministry of Economic Development) and its purpose was to gain a better understanding of how the owner-managers of small firms in New Zealand approach the task of developing their managerial capability.

Literature Review

The increasing focus on ways in which SMEs can contribute to economic development underpins the widely-held hope (amongst governments) that those responsible for owning and managing small firms will not only see growth as a desirable goal, but will engage in 'developmental activities' as a way of achieving this goal. While the precise nature of the relationship between firm performance and managerial participation in management development activities has not been defined, there is a growing literature that suggests that if managers do engage in management development activities, their firms (and therefore the economies of which they are a part) will benefit through increasing their growth capability (Devins, Johnson, Fuller-Love, 2006; Gold, & Holden, 2002; Gurría, 2008; Mumford & Gold, 2004; Small Business Service, c2004; Small Firms Enterprise Development Initiative, 2002). This rationale has been the underpinning for government agencies to focus on the development of capability within firms (by focusing on the owners and/or managers of these firms) as a way of achieving the desired outcome – economic growth. This situation has led to an increasing use of competency-based approaches in a number of countries (Garavan & McGuire, 2001) and a commitment by government to competency-based approaches such as National Vocational Qualifications and the Management Charter Initiative in the UK (Loan-Clarke, Boocock, Smith, & Whittaker, 2000).

There is some evidence that suggests that the adoption of competency frameworks is positively related to organisational performance (Heffernan & Flood, 2000) and that management development can be used as a strategy for growth (MacMahon & Murphy, 1999; Maxon & Stone, 1977; O'Dwyer & Ryan, 2000). However, there are also those who argue against the assumption that training will improve performance (Westhead & Storey, 1996) or who question whether the link between competencies and organisational performance has been proved (Murray, 2003). There is also evidence that indicates that the benefits of MD accrue to individuals not to firms (Loan-Clarke, Boocock, Smith, & Whittaker, 2000). A Dutch study suggests that participation in management training can have a positive effect on business growth, but only through its energising effect on participants (Schamp & Deschoolmeester, 1998). Others suggest that the benefits are real, but are narrow in terms of their outcome; resulting in increased business volume rather than 'venture growth' overall (Chandler & Hanks, 1994).

This key assumption (that there is a clear relationship between managerial action and firm performance) has given rise to research into a whole set of questions about the way in which the managers of small firms engage in developmental activities. For example, in terms of management training, Patton and Marlow (2002) have examined the reasons why managers do not invest in training, and suggest that managers make a training investment when prompted by problems – not as part of a strategic decision. Other researchers suggest that a firm's use of management training can be explained by external structural variables (industry, turnover, size); internal structural variables (written plan, performance assessment) and policy variables (Thomson & Gray, 1999). Similarly, (Loan-Clarke, Boocock, Smith, & Whittaker, 1999) found that investment in management training and development is influenced by type of ownership, size, the number of managers and level of family management (Kitching & Blackburn, 2002).

There is also research that reports on the attitudes that the owners and managers of small firms have towards frameworks such as the UK's NVQ – in an attempt to understand some of the barriers to firms engaging in this particular 'developmental activity'. This study (Smith, Whittaker, Loan Clark, & Boocock, 1999) shows that firms are ambivalent about the NVQ and feel that it lacks relevance, particularly to small firms. More specifically, research into identifying the factors that influence the adoption of competency models (Heffernan & Flood, 2000) found that competency frameworks were more likely to be adopted in organisations that have sophisticated HR strategies. Their use is also influenced by a firm's size, ownership structure and environment.

Research of this type (i.e. into the reasons why firms do not engage in developmental activities such as training and NVQs) is complemented by research which seeks to identify ways of getting small firms to engage in these activities. Devins and Gold (2002) suggests that a useful